



TELEPHONE
1852
NUMBER

THE CHEMIST AND DRUGGIST

TELEGRAPHIC
ADDRESS
CHEMISTS LONDON.

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E.C.

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ENGLAND ... 1859.

AUSTRALASIA ... 1885.

[Registered as a Newspaper.]

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No. 494. VOL. XXXV.

OCTOBER 5, 1889.

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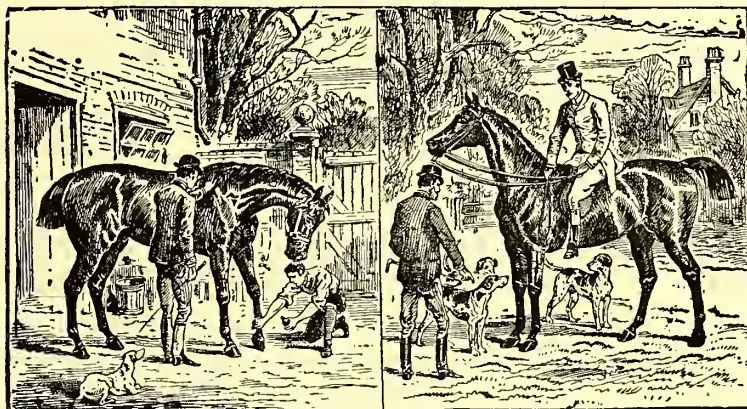
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Essence of Pure Coffee	In 6d., 1s., and 2s. Bottles.
Do. Coffee and Chicory	In do. do.
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"Edinburgh" Coffee and Milk	In 1-lb. Tins.
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"Edinburgh" Cocoa and Milk	In do.
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Do. do. with Pure Coffee	In do. do.
"Perfect" Malt Extract	In 8-oz. (fluid) Bottles.
Do. do. with Cod Liver Oil	In do. do.

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"FLETCHERS' CONCENTRATED LIQUORS are valuable and most serviceable preparations. We have tested them all. THEIR PURITY AND STRENGTH ARE UNQUESTIONABLE."

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What does THE CHEMIST AND DRUGGIST say of them? +

"FLETCHERS' CONCENTRATED LIQUORS have a higher claim than that of mere convenience. THEIR POTENCY IS UNQUESTIONABLE, and they provide the element of CONSTANCY where that can generally not be ascertained, or even obtained, by the ordinary methods."

What does THE PRACTITIONER say of them? + + + + +

"We have subjected FLETCHERS' CONCENTRATED LIQUORS to a prolonged test, and we are able to report that, when diluted according to the directions given, THE RESULTING TINCTURES, &c., ARE INDISTINGUISHABLE IN STRENGTH, APPEARANCE, AND EFFICACY FROM THE OFFICIAL PREPARATIONS. They have the additional merit that their strength is constant and easily ascertainable, and that they keep well. From the mere point of view of convenience, therefore, they have obvious advantages, and WE CAN CONSCIENTIOUSLY RECOMMEND THEM."

What does THE MEDICAL PRESS say of them? + + + + +

"Both in flavour and in medicinal properties FLETCHERS' CONCENTRATED LIQUORS were EQUAL TO THE BEST PREPARATIONS WE COULD PREPARE FROM FRESH DRUGS. By their use all the trouble and annoyance of variety of colour and strength, which is so frequent in our fresh infusions, is avoided, and this, so far as we could trace, without any sacrifice in the therapeutic power of the drug or in the physical characters of the preparation. Indeed, when we consider how much material is wasted in preparing the fresh infusions and tinctures, WE RECOMMEND THESE ADMIRABLE PREPARATIONS, not only on account of their potency and convenience, but also on account of their economy. THEY ARE A VERY DISTINCT ADVANCE IN PHARMACY, and incomparably superior to the one-to-seven infusions which did so much to bring concentrated preparations into disrepute. No physician need hesitate to prescribe infusions made from these liquors. THEY ARE INDISTINGUISHABLE FROM THE MOST CAREFULLY PREPARED OF THE FRESH PREPARATIONS, AND THEIR EQUAL IN POTENCY."

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FOR DISPOSAL.

Educational.

Baxter's "British Flowering Plants," 6 vols., cost 10*l.*, for 7*5s.*; "School Botany" (out of print), 8*s.* 6*d.*; Hooker's "British Botany" (new), 8*s.* 6*d.*; double lenses, 2*s.* 6*d.* Higginson, Newferry, Birkenhead.

Drugs and Chemicals.

Sulphur and cream of tartar lozenges, 4 lbs. post free for 4*s.* 6*d.* Davidson & Gray, Dundee.
4 ozs. ol. cubebæ ang., 2*s.* 6*d.* oz., or offers, 100/33.
Quicksilver, any quantity, free parcel post, 2*s.* 10*d.* lb. Scott & Son, Rochdale.

Formulse.

Reliable recipes, 6*d.* each; full set of 130 neatly copied in book, 7*s.* 6*d.*; send for list, "Chemist," Edwards, Wye, Kent.
1*s.* each for really valuable veterinary recipes acquired during 30 years' successful use. Send to Sberiff, Lurnfleet, Goole.
Seed-dressing Season, 1889.—A recipe for manufacturing one of the finest carbolised seed-dressings ever yet introduced, having been used for years by some of the leading farmers in this country and colonies; price 1*s.*, post free. E. Grand, 17 Alexandra Road, Norwich.

Literature.

Cheap, about 14 years' *Pharmaceutical Journals*, 1859 to 1877, the lot 7*s.* 6*d.* 101/41.

Shop Fittings.

White stone bottles, narrow mouthed, 5 oz. 7*s.* 6*d.*; 1 oz. 2*s.* 6*d.*; sample 6*d.* Mangnall, Manningham, Bradford.
Wanted, an offer for chemist's counter, 2 2-gal. carboys, 2 show jars, &c. For particulars apply, W. B., 11 Cross Street, Ryde, I. of W.
Drawers, several nests, very cheap; also counter and wall cases, dispensing screens, counters, bottles, jars, carboys, and sundry fittings; great bargains. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.
Glass bottles, job lines.—About 50 gross 3-oz. pale green pomades for corks, 4*s.* 6*d.* per gross; 4 gross 6-oz. screw nickel-capped pomades, 1*s.*; 1 gross 16-oz. ditto, 30*s.*; 3 gross 1-pint (reputed) green syrups, 7*s.*; 4 gross 1-pint ditto, 10*s.*; 2 gross 1-pint ditto, 15*s.*; 5 gross 1-pint white syrups, 12*s.*; 3 gross 1-pint ditto, 20*s.*; 1 gross 6-drachm lavender, 5*s.*; 3 gross 2-oz. white globe-necked panels, 7*s.* Hearn, 381 Kingsland Road, London.
Second-hand.—One gallon black store bottles, gold labelled, 12*s.* per dozen; one specie jar, 31 in. total height, ornamental scroll label and ornamental glass cover, 1*l.* 15*s.*; two specie jars, 23 in. total height, royal arms, with japanned cover and mahogany plinth, 4*l.*; 1 ditto, 30 in. total height, glass gilt cover, royal arms, 2*l.* 17*s.* 6*d.*; 1 ditto, 30 in. total height, specie, 2*l.* 8*s.*; 1 16-gallon carboy, cut stopper, 1*l.* 16*s.*; 1 12-gallon cylinder carboy, 1*l.* 5*s.*; 11 in. marble mortar and pestle, 10*s.*; 1 quart tincture press, 7*s.* 6*d.*; 1 1-gallon ditto, 1*l.* 7*s.*; 1 6-gallon carboy and stand, 14*s.*; counter, 6 ft. 8½ in. long by 2 ft. 5½ in. Spanish mahogany front, trusses and moulded edge, 5*l.*; counter 11 ft. 10½ in. long by 2 ft. ¾ in., mahogany front, trusses and pilasters, 5*l.* 10*s.*; 140 ft. run deal shelves, painted, black polished edges, 1*l.* 10*s.* W. Hawke, & Son, Shop Fitters, Wild Court, Great Wild Street, W.C.

Lamp, with or without pillar, two or three lenses; good condition. 92/75.

18 40-oz. ointment pots, tin lids; 11 16-oz. gold-labelled syrup bottles (white); 2 20-oz. odd po's; 2 20 oz. ointment pots; 20 assorted narrow stoppered rounds; 7 ditto wide ditto; 2 syrup bottles with caps; 8 8-oz. pots with new tin lids; offers wanted. A., 27 High Street, Poplar, London.

Shop fittings.—The entire fittings of a chemist's shop to be disposed of, comprising—12 ft. run 60 mahogany-fronted drawers, glass knobs and gold labels, with bottle lockers under and shelving and cornice over; 8 ft. serving counter, panelled front, with till, label and cork drawers behind; a 7 ft. ditto to match, with mahogany dispensing screen fitted inside with shelves; mahogany desk and glass case; bent-glass counter case; 18 4 lb. and 12 ½ lb. blue ointment jars, gold labelled; 12 doz. 10 oz., 20 oz., and 40 oz. wide and narrow-mouth shop rounds, gold labelled with contents; 2 6 gallon pear-shape carboys and stands; pill machine, pestles and mortars, measures, funnels, pair balance scales and weights; also grain ditto in box; knives, spatulas, tiles, string box; the whole as above in first-class condition, price 25*l.* the lot, or would be separated; also a large quantity of fancy sundries and stock at less than half-price. Natali & Co., 184 Aldersgate Street, nearly opposite Maw's.

For sale, bargains.—All numbers refer to Maw's illustrated list.—Counter cases, plate glass, fig. A18, 4 ft. 9 in. long, 90*s.*; 6 ft. long, 5*l.*; 8 ft., 6*l.* 10*s.*; tooth-brush cases, A10, 30*s.*; ditto, A9, 30*s.*; A16, 30 in. long, 45*s.*; 3 ft. long, 50*s.*; 3 ft. 6 in. long, 55*s.*; 5 ft. 6 in. long, 5*l.*; A4, 13 ft. 6 in. upright and bent plate-glass case, 5*l.*; ditto, 4 ft. 6 in. long, flat case in front, 80*s.*; desk and case, plate glass and mahogany, 35*s.*; 6 ft. dispensing screen, plate glass and mahogany, 4*l.* 10*s.*; 5 ft. ditto, 90*s.*; plate-glass case fronted counters, mahogany tops, 5 ft. long, 6 ft. long, 10 ft. long; 14 ft. mahogany counter; specie jars, carboys, bottles, jars, scales, show stands, 3 glass shelves, 60*s.*, worth 5*l.* 10*s.*; mahogany wall case, 9 ft. 9 in. long, 8 ft. 10 in. high; ditto, 6 ft. by 4 ft. high; ditto, 4 ft. by 5 ft. 6 in. high; pedestals for carboys, mahogany, fig. A270; 2 ditto, fancy iron ditto, 50*s.*; 16 ft. drawers, shelving, Loeder's cornice, complete, 9*l.* 10*s.*; outside lamps; sponge cases, &c. Elkana Natali, 207 Old Street (near County Court), Shoreditch, London. No connection with any other house.

Miscellaneous.

Three perfume sprays, imitation five-chambered revolvers; cheap. Lawrence, Chemist, Peel, Man.

Woolfall's liquid paints, in 1-cwt. casks, white, stone, maroon, black, green; about 7 cwt.; will sell cheap. Connor, Doncaster.

Galvanic battery, Maw's, fig. 15, p. 353; quite new; 25*s.* Lloyd, 9 Sheldon Street, Paddington, W.

A quantity of saleable patent, opium, winch. liq. copaiba co., tooth forceps, pill machine. 102/4.

Harness composition tins, about 20 gross each size 1*s.* and 1*s.* 6*d.*, for 3*s.* 11*d.* and 5*s.* per gross. Thomson, Chemist, 26 High Street, Elgin, N.B.

Valuable large modern microscope by Dallmeyer, with high-class objectives and accessories, including Sorby's spectroscope, in perfect condition; cost 90*l.*, price 35*l.* net. Hinton, Chemist, 38 Bedford Street, Strand.

Coventry Macbinists' Company's convertible tandem tricycle for sale; cost £30; what cash offers? Price, Chemist, Walthamstow.

Avery's brass scales, 9-in. beam; dispensing scales, fig. 7, Maw's; what offers? ½-gal. tincture press; patents; send for list; mahogany desks. Fowler, Chemist, Portsea.

Wenham lamps, in perfect condition, cost 80*s.*, very cheap, 60*s.* each; the best light going, one lamp will light a good-sized shop. J. Walker, Upper Brighton, Birkenhead.

Wills's "Materia Medica," ninth edition, quite new, illustrated, 7*s.*; four dozen lantern slides, Lake district, Scotland, 8*s.*; microscope, equal to new, 2*l.* 2*s.*; "Common Objects of the Microscope," by Rev. J. G. Wood, M.A., illustrated and printed in colours, cash 2*s.* 8*d.*, quite new. R. E., 67 Romilly Road, Finsbury Park, N.

Microscope slides.—Thousands of gorgeous, brilliant opaque, &c.; 5*s.* dozen, cash or exchange; list free. Wanted, books by Ainsworth, Dumas, Scott, &c.; also latest editions Wills's "Materia Medica," Watt's "Organic Chemistry," ditto "Inorganic," Prantyl's "Botany," Sutton's "Analysis," Muter's "Short Analysis," Wanklyn's "Water Analysis," Beale's "U. Deposits," Klein's "Histology." Henry Ebbage, 344 Caledonian Road, London.

Hughes's Pamphengos lantern, 4-inch condenser, cost 6*l.*, price 3*l.*; Hughes's Articulus screen frame, 25*s.*, cost 50*s.*; 12 feet square sheet, 20*s.*, cost 35*s.*; tripod stand for lantern, adjustable, 20*s.*; reading lamp, with bell and signal, 7*s.* 6*d.*; a number of very beautiful slides, coloured and plain, 1*s.* 3*d.* each, 12*s.* dozen; the above are in perfect condition, and will be sent on approval. Bracher's automatic still, new, 20*s.*; Clarke's adjustable bed tray, new, 5*s.* 6*d.*; several volumes *Pharmaceutical Journal*, bound, and "Year-book of Pharmacy," 1*s.* 6*d.* vol. Francis E. Rookledge, Easingwold.

WANTED.

Shop fittings.—All descriptions purchased for cash. Natali, 184 Aldersgate Street, E.C.

Wills's "Materia Medica," with plates, map, &c. M., 65 Goldhawk Road, W.

Bentley's "Botany," cash or exchange. Jones, Chemist, Kilnburst, Rotherham.

Fashionable fittings, complete or otherwise. "Cash," 37 Bedford Place, Russell Sq., W.C.

"Major Notes in Physics," "Botany and Organic Chemistry," T. Dalkin, 154 Cemetery Road, Sheffield.

"The Chemist and Druggist Diary" for 1889; state price. Pearson, Chemist, Penarth Dock, Penarth.

Full price (4*d.*) will be paid for copies of *The Chemist and Druggist* for September 21, 1889, sent to the Publisher, 42 Cannon Street, E.C.

St. Jacobs oil, Warner's safe cure and pills, and surplus stock of patents; forward lists, 100/32.

Small hand drug grinder, one suitable for grinding hard bisentits to the consistency of fine flour; must be cheap. Particulars to 226 Rochdale Road, Oldham.

Addresses Wanted.

Berry, chemist, late of Guildford. Will any chemist much oblige Thomas, Chemist, St. Leonards?

Present address of Messrs. Stewart, dentists, late of 107 Victoria Park Road. By letter to Mr. Gregory, 87 High Street, Notting Hill Gate.

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PINE EXTRACT,—For Rheumatism, &c. More cleanly than the Extract.

POROUS PLASTERS (Marginal), **RUBBER COMBINATION**.—These, especially in Belladonna, will be found infinitely superior to those of Foreign Manufacture.

MUSTARD LEAVES in fancy decorated Tin, containing **THREE LEAVES**. Also in tins containing $\frac{1}{2}$ and 1 yard each. The price is lower than anything of similar character offering. We guarantee quality.

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	No. ..	0	1	2	3	4	5	
a. Savars CHAMOIS LEATHER & FLANNEL	...	single	6/-	7/-	11/6	13/6	16/-	20/- per doz.
b. " " " "	...	double	20/-	20/-	26/-	32/-	39/-	48/- "
c. Savars FELT, Scarlet & White assorted	...	Fig. 1, single	5/-	7/6	10/6	13/6	18/-	20/- "
d. Glass-top Boxes, containing 1/4 doz. each No. 1, 2, 3, & 4 Felt Chest Protectors	13/6 the box
e. Savars FELT, Scarlet & White assorted	...	double	13/-	17/-	23/-	29/-	34/-	45/- per doz.
Fig. 2, Covering Chest and Back.								
f. Glass-top Boxes, containing 1/4 doz. each No. 1, 2, 3, & 4 Double Chest Protectors	26/- the box
ff. Savars "GOOD SAMARITAN," Vest-Shape, covering Chest } and Back, Fig. 3	...	No. 1	2	3	4	5	6	
	...	19/-	23/-	29/-	34/-	45/-	52/-	52/- per doz.
fff. Glass-top Boxes, containing 1/4 doz. each No. 1, 2, 3, 4 "GOOD SAMARITAN" Protector	26/6 the box



Fig. 1.



Fig. 2.

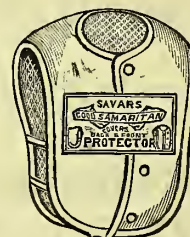


Fig. 3.

The SIZES of Savars SINGLE PROTECTORS are—

No. 0—7½ × 6½; No. 1—9½ × 8; No. 2—10½ × 9½; No. 3—12 × 11; No. 4—14 × 12; No. 5—15 × 13½.

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MEDICATED WOOL.

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Carbolic Wool	...	2/- "	Iodoform Wool	...	5/- "
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Boric Lint...	...	1/6 per lb.	Salicylic Lint	...	3/- per lb.
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GAUZE FOR ANTISEPTIC DRESSINGS.

Gauze, Carbolicized	...	1/9 dozen yards	Gauze, Iodoform	...	4/- dozen yards
" Eucalyptus	...	2/3 "	Gauze, Sero Sublimate, Sir T. Lister's,	...	1/6 per packet.
" Thymol	...	3/- "	in packets of 6 yards	...	

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Chemists and Druggists not receiving the above who are desirous of doing so are requested to make application enclosing Business Card, on receipt of which their names will be placed on the Register for all future issues.

An Offer to Chemists.

We are about to send literature on "Vinolia" to various chemists, and if all those chemists who have stocked our preparations will at once notify us of this fact by a post-card, we will, without delay, inform the medical men in their locality of the fact. In this way Chemists may increase somewhat their business, and doctors labour under the advantage of knowing precisely where our goods can be obtained.

Reason how we may, "Vinolia" has proved itself a necessity in medical practice by its use in numberless cases of Eczema, some of them of very long standing having progressed to recovery. Not all cases have been cured, but this is no drawback, for reasonable people are not always looking for cure all. One thing, however, can be said of "Vinolia;" it is that it will, without fail and at once, relieve itching and irritation of the skin from any and every cause. For sunburns, after shaving, and for chafes, there probably has never been anything so satisfactory to use. There is one thing also that can be said of "Vinolia" Soap, and that is, that its distinctive characteristic is that it contains extra fatty matter, it is made from the very best and finest materials that can be procured, it is manufactured on the most absolutely scientific lines, it is turned out in a perfectly neutral state, and if, peradventure, in washing, any free alkali is by any chance dissolved, its action upon the skin is completely provided against. It is of course well for all to bear in mind that the skin of the townsman, and those who lead a sedentary life, is not over abounding in fat, and tends to become dry and hard, and to lose its velvety feel; all the more reason that a proper soap be used; all the more occasion then that the skin be promoted in its remedial efforts by such a plastic emollient cream as "Vinolia."

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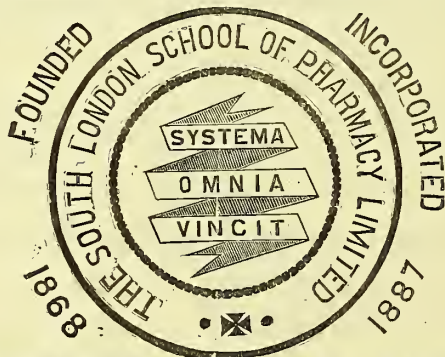
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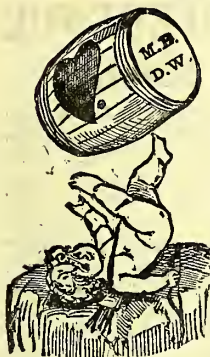
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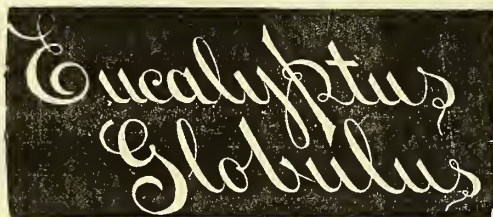
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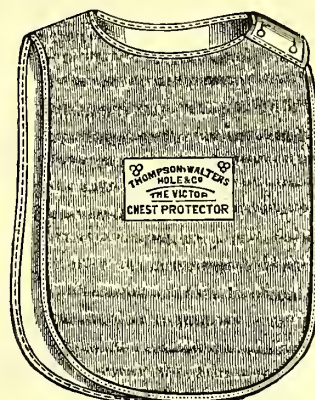
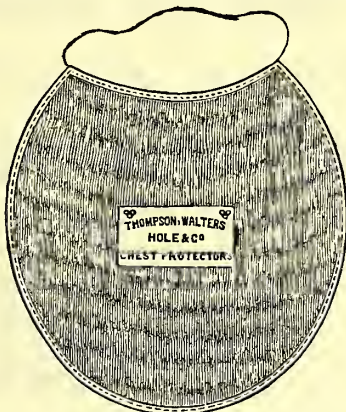
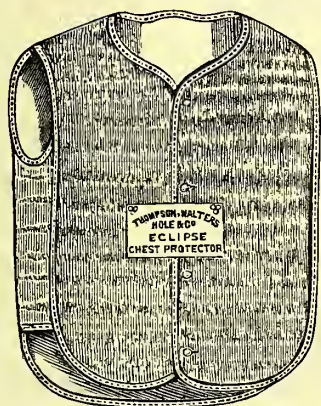


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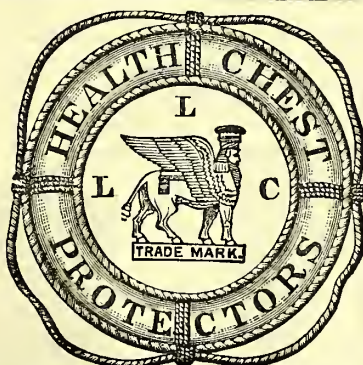
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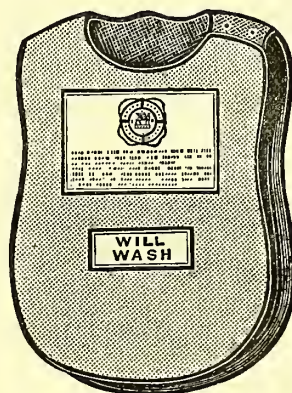
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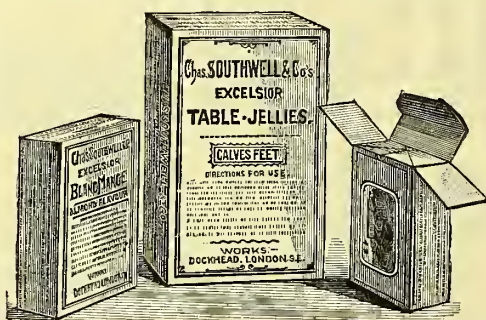
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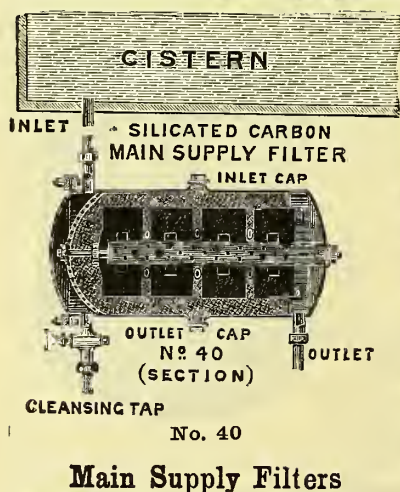
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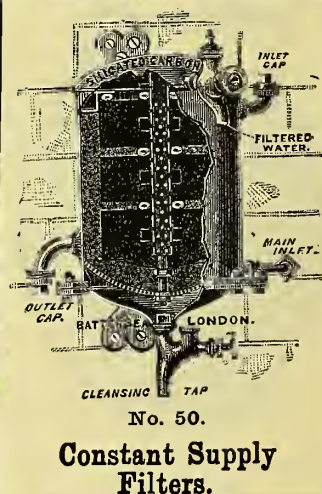
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The Chemist and Druggist

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Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, OCT. 5, 1889.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

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EXCHANGE COLUMN ADVERTISEMENTS will appear on page '6 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the issue of the Saturday following.

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IMMEDIATELY, a Junior Assistant accustomed to a Mixed business. Apply, with particulars, to F. T. Patman, 30 King Street, Whitehaven.

WANTED, a qualified and trustworthy Assistant to manage a branch. Apply, with full particulars, and enclose photo, to E. Lloyd, Chemist, Abergel.

JUNIOR Assistant; indoors; one accustomed to a good country business preferred. State salary, height, and references to Allen & Neale, King's Lynn.

WANTED, indoor Assistant for a good Mixed Business in the country. Apply, enclosing carte, and stating age, salary, and full particulars, to Mr. John Wain, Chemist, Ripley, Derby.

DISPENSER wanted immediately; outdoors; aged about 20; personal application only. Dr. Smith, 111 Keeton's Road, Bermondsey, near Spa Road Station, S.E.Ry. Please apply after 6 P.M.

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AS Assistant; aged 25; height 5 ft. 11 in.; accustomed to first-class business; highest references; Major qualification. E. W. H., 74 Queen's Road, Clifton, Bristol.

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AS Branch Manager or Outdoor Assistant; good Prescriber; aged 28; if country, Norfolk preferred; first-class references. "Isis," 191 Morley Avenue, Noel Park, London, N.

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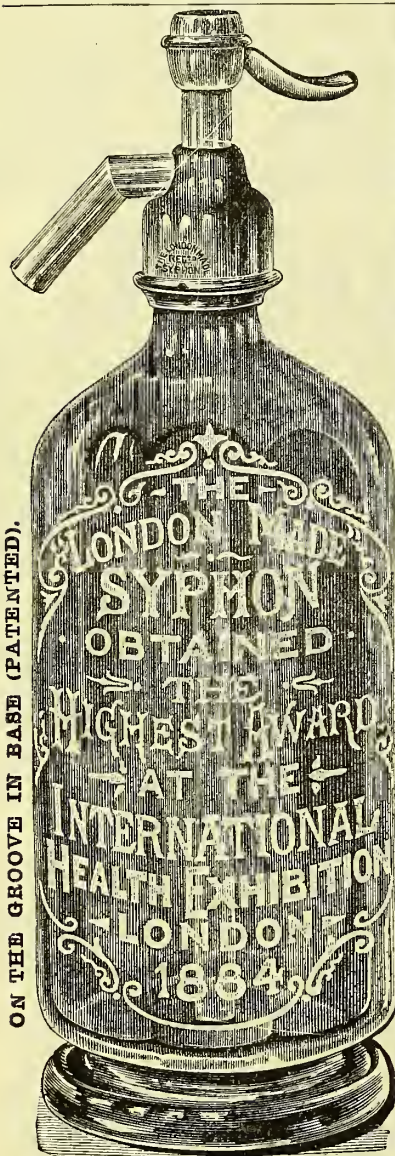
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The high reputation this bottle has achieved is due to the fact of its being in every particular the most perfect yet introduced; and when compared with others in the market it stands pre-eminent. It is most simple in its working parts, therefore the least liable to get out of order; it is the most easily opened, the lightest pressure on the handle being sufficient; it produces a more highly-charged gaseous water than is usually obtained from syphons; it compares most favourably in appearance with any, and the metal top being entirely free from lead, the prejudice against syphon drinks is at once removed, as the liquid passes over pure tin only.

All our Syphons are now fitted at the base with a groove, so that drips from the spout that run down the sides are prevented from soiling the table. See drawing.

NOTE.—Syphons made with our patent foot for collecting excess of liquid dripping from the spout after use are supplied at no extra charge, and will be found of great utility in preventing stains, &c., upon table linen. This is a desideratum long been wanting, particularly for private-house use. Send for sample; forwarded upon receipt of 2s.

Any name, crest, or trade-mark put on the glass by an improved acid process, at from 18s. to 24s. per gross. There is a three-fold advantage in this, as it forms a continual advertisement, is a great ornament, and a preventive of fraud. The plate for engraving costs extra from 5s. upwards, according to the artistic device required.

PRICES (WHITE, BLUE, GREEN, OR AMBER):—

	By the gross,	Less than 1 gross,
	per doz.	per doz.
Quart size	£1 2 0	4 0
Pint size	1 1 0	1 8 0
Half-pint, Pear shape	1 0 0	1 2 0
Octagonal vases, any colour (including Azure Blue)	1 4 0	1 8 0

Tops, nickel-plated, from 5s. 6d. per doz. extra. Tops, silver-plated and burnished, from 8s. per doz. extra. A charge is made for packing, except when ordered in our patent bin cases (holding one dozen each, price 2s. 6d. each).

Please Note.—E. & F. are the only firm manufacturing Syphons in England that do not supply them filled, and so compete with their customers' trade.

BARNETT & FOSTER,

MINERAL WATER ENGINEERS,
Manufacturing Chemists, and General Providers for the Aërated Water
Wine, Beer, and Cyder Trades,

"Niagara Works," 26th Eagle Wharf Road, London, N.

Send for Price List of Soda-water Machinery and Accessories.

EIGHT PRIZE MEDALS AWARDED

GOODALL'S HOUSEHOLD SPECIALITIES.

YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., and 2s. each

GOODALL'S BAKING POWDER.

The Best in the World. 1d. Packets; 6d., 1s., 2s. and 5s. Tins.

GOODALL'S EGG POWDER.

One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s. and 5s. Tins.

GOODALL'S CUSTARD POWDER.

Delicious Custards without Eggs. In Boxes, 2d., 6d., and 1s. each

GOODALL'S BLANCMANGE POWDER

Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

GOODALL'S QUININE WINE, B.P.

Best Tonic yet Introduced. Bottles, 6d., 1s. and 2s. each.

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Makes the Best Ginger-Beer. Packets, 3d. and 6d.

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For Painting Stoves, Grates, Iron, Tin, &c. 6d. and 1s. Bottles

GOODALL'S LAVENDER WATER.

A Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each

GOODALL'S PLATE POWDER.

For Polishing and Cleaning all Metals. Boxes, 6d., 1s. and

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In $\frac{1}{2}$ - and 1-pint boxes, 3d. and 6d. each.

PROPRIETORS—GOODALL, BACKHOUSE & CO., LEEDS.

PATENT MEDICINES AND

DRUGGISTS' SUNDRIES.

Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

GOODALL, BACKHOUSE & CO., LEEDS.

APPOINTMENT of AGENTS. UNITED KINGDOM TEA COMPANY, LIMITED.

The Directors are entertaining applications for the Agency for the Sale of the Company's Teas. A liberal Commission will be allowed. The appointments will be found to be most valuable, entailing little, if any, trouble, in addition to which, from the very extensive nature of the Company's advertising in all the principal newspapers and periodicals throughout the country, the appointment will be the means of bringing large numbers of customers to the Agent, who, when buying the Teas, will at the same time purchase other articles.

About 1,200 Agents have already been appointed; it has been decided to increase this number, until in every Town and Village in the Kingdom there is an Agent of the Company.

Offices—21 MINCING LANE, LONDON, E.C.

DUTY-PAID STORES—

IMPERIAL WAREHOUSE, LEMAN ST., LONDON DOCKS.

TYRER'S SAUCES

GOOD
VALUE

“BOROUGH” KETCHUP

THE GIANT 1d. BOTTLE OF SAUCE.

LARGEST IN THE TRADE.

In Half-Gross Boxes, at 6/6 per Gross.*

“BOROUGH” KETCHUP, WORCESTER, HARVEY, YORKSHIRE,
OR READING SAUCE.

1d. Sample Bottles, dozen parcels	--	--	per gross 5/	extra quality 6/
1/2 gross boxes	--	--	5/6	6/
1d. Giant Bottles, dozen parcels	--	--	6/	6/
1/2 gross boxes	--	--	6/6*	6/
1/2-Bottles (flat or round), reputed 1/2-pint	--	--	16/	24/
1/2-Bottles (flat or round), reputed pint	--	--	25/	25/
1-pint Imperial Round Stoppered Bottles	--	--	30/	28/
1-pint Imperial	--	--	50/	60/
12 1/2-gallon Casks (casks free) ..	--	--	each 20/	22/

ROYAL CAFÉ SAUCE.

In 8-oz. square-stoppered bottles, 48/ per gross.

A rich, fruity Sauce of fine flavour, and worth especial attention, as being the most saleable in the market.

Samples of any kind Sent Free of all Cost by

PETER TYRER,

The “Borough” Ketchup and Sauce Maker,

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ROTOR AGENCY WEST NILE STREET, GLASGOW.

Also Sold by W. & C. FANTIN, Upper Thames Street, LONDON, E.C.

BURGOYNE & CO., 16 Coleman Street, LONDON, E.C.

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T. BAGE BLYTON & CO. MANUFACTURING PHARMACEUTICAL CHEMISTS,

AND MAKERS OF MEDICATED LOZENGES OF

The Throat Hospital
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The British Pharmacopœias.

Jujubes and Pastilles.

Private and Proprietary

Formulae carefully Compounded.

Cachous and Compd. Pellets.

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Twemlow's Chlorodyne.

Fruit Salines.

Soluble Essence of Lemon.

OUR BRONCHIAL LOZENGES CREATE A SALE ON THEIR MERITS.

WORKS—76 GORDON STREET, LOWER BROUGHTON, MANCHESTER, & GREENGATE, SALFORD.

Agent in London—Mr. ARTHUR W. SHIRLEY, 30 Paternoster Square, E.C.

WILKINSON'S COMPRESSED ENGLISH HOPS.

Best Hops compressed into small parcels of one pound and half-pound, and sent out in cases containing 30 lbs. each. These hops are specially selected and compressed for keeping purposes, and will retain their aromatic strength for a considerable time.

They are introduced to the public to enable them to make their own HOP BITTERS, YEAST, HOME BREWING, and numerous other purposes. Full particulars given in each packet.

Samples and Prices sent on application to

A. WILKINSON & SONS, 37 CANNING PLACE, LIVERPOOL.

P.S.—Chemists will naturally see the great advantage in making their own Bitters from the Pure Hop itself.

Dealers in every description of Isinglass.

“RAMORNIE.” LIEBIG'S Extract of Meat.

As supplied to the War and India Offices.

1-lb. Jars.....per lb.	6/2per doz.	74/0	2-oz. Jars.....per lb.	7/0per doz.	10/8
1/2-lb. Jars.....	6/4	88/0	1-oz. Jars.....	7/8	8/8
4-oz. Jars.....	6/7	19/9	1/2-oz. Jars.....	6/0	7/0

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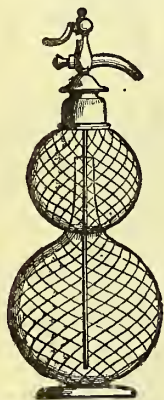
Write for Detailed Prices List to the Australian Agent, 9 and 11 Fincham Avenue, S.C.

6 lbs. Carriage Free.

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DRUGGISTS' SUNDRIES, SURGICAL APPLIANCES,
PATENT MEDICINES, ETC., NOW READY.

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FEVRE'S
SELTZOGENES.

Caned, each	2 PINT. 7/	3 PINT. 8/	5 PINT. 12/5	8 PINT. 20/9
Wired, each	2 PINT. 6/6	3 PINT. 7/9	5 PINT. 11/9	8 PINT. 18/11
£2 worth or more, 5 per cent. discount.				

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BUYERS ARE CAUTIONED TO SEE THAT THEY GET THE
GENUINE



DR. JOHN HOOPER'S PILLS,

Which may be known by the Name of the Inventor, engraved in white letters, being on the Government Stamp.

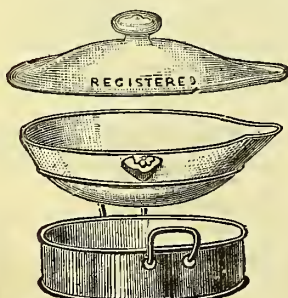
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AMERICAN BUYERS are particularly Cautioned !!

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REGISTERED.



This Water Bath will supply a long-felt want amongst Chemists and Perfumers, where small quantities of materials have to be dealt with.

The old form of Water Bath necessitates the use of a second vessel for pouring the melted Pomade, Cream, or other substance into the bottles or jars in which they are sold. In the "MAY-ROBERTS" Water Bath the earthenware bowl can be lifted out of the tin containing the boiling water, the process of cooling being thereby very much expedited, and the contents can be poured into the bottles or jars direct from the bowl. The Bath is also supplied with an earthenware cover.

1 PINT.	5 PINT.	10 PINT.	[1]
Each 3/0	5/6	9/6	

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Howards and Son (Pharm.)
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Lofthouse and Saltmer
May and Baker
Morris and Callender
Moss and Co.
Pronk, Davis and Co.
Stern, G. and G. (Pumline)
Smith, T. H., and Co.
Tyske and King
White, A., and Sons
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Lynch and Co.
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Wood Vincent

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CHL. OF POTASH

Burroughs, Wellcome and Co.
Hooper, B., and Co.

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National Chemical Co.

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Davenport (Browne's)
Freeman, R.

CHLOROPHORM, &c.

Duncan, Flockhart and Co.
Macfarlan, J. F., and Son
Smith, T. H., and Co.
Tyske, Layman and Umney
Zimmermann, A. and Son

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Hassalls (Phospho)

COCAINE-HYDRO

Howards and Sons

COCA WINE

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Evans, Sons and Co.
French Hygienic Soc.

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Fry and Sons
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Scheidler Bros. and Co.
Van Houten's Cocoa

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Allen and Hanbury
Breke and Hownd
Burroughs, Wellcome and Co.
Evans, Sons and Co.
Hill, A. S., and Son
Lofthouse and Saltmer
Oppenheimer Bros. and Co.
Smith, T. J.
Southall Bros. and Barclay
Woolley, Sons and Co.
Wright, Layman and Umney

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Brooks, Peel and Co.
Sanders, H. C., & Son

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Fuerst Bros.
Hooper, B., and Co.
Leo and Co.
Wyleys and Co.

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Pascall, J.
Warrick Brothers

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Fletcher, Fletcher & Stevenson

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Solport Bros. (Plasters)
Thompson, M. F.
Young, H.

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Robinson and Sons (Absorbent)
Sanger, J., and Sons
Seabury and Johnson

CRSED LINED

Mumford, G. S.

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Maw, Son and Thompson, S.
Newbery and Sons
Reeb, H.

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Thompson and Capper
Warrick Bros.
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Fentiman & Co.

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Spratts (Patent)

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Hamilton and Co.
Jeyes' Sanitary Compounds
National Chemical Co.
Seabury and Johnson
Sanitis Co.

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Barclay and Sons (Limited)
Evans, Lecher and Webb
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Hill, A. S., and Son
Hockin, Wilson and Co.
Laris and Co.
Ray Bros., Lim.
Lynch and Co.
Marriot, E., and Co.
Maw, Son and Thompson, S.
May, Roberts and Co.
Sanger and Sons
Schultz and Co.
Thompson, Walters, Hole and Co.
Toogood, W.
Wood Vincent

DRUMS, CANS, &c.

Noakes and Co.

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Pronk, Davis and Co.

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Shirley, A. W.

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Allen and Hanbury

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Darton, F., and Co.
Gent and Co.

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Clarkson and Co.
Elliman, Sons and Co.

ENEMAS

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Ingram and Son
Lynch and Co.
Maw, Son and Thompson, S.
Sanger and Son
Schultz, F., and Co.

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Corran, J. R. (Glass)
Harris, A. J. (Glass)

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Bush, W., Son and Co.
Cocking (Japan Peppermint)
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Duckworth and Co.
Evans, Sons and Co.
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Stevenson and Howell
Treatt, R. C.
Warrick Brothers
Wright, Layman and Umney
Yost, G.

ESSENCES

Beckett, W.
Boehm, F.
Brady and Hinchliffe
Burgoyne, Burdidge and Co.
Bush, W. J., and Co.
Curmuck, J.
Duckworth and Co.
Goodall, Backhouse and Co.
Hay, W.
Idris and Co.
May and Baker
Oldfield, Pattinson and Co.
Southwell, C., and Co.
Stevenson and Howell
Tyrer, P. (Anchovies)
Woolley, Sons and Co.

ETHER

Duncan, Flockhart and Co.
Howards and Son
May and Baker
Robins

EUCALYPTUS

Downie B. I. P. Co.

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Allen and Hanbury
Barter, G., and Co.
Burgoyne, Burdidge and Co.
Evans, Sons and Co.
Fletcher, Fletcher & Stevenson
Heaton, Squire and Francis
Hooper, B., & Co.
Moss and Co.
Oldfield, Pattinson and Co.
Potter and Clarke
Wright, Layman and Umney

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Australian Meat Co.
Boveri (Limited)
Brand and Co.
Denevay's Peptone Co.
Liebig Co.

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Solport Bros.

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Hearn, E. A., and Co.
Hockin, Wilson and Co.
Kilner Bros.
Maw, Son and Thompson, S.
Marriot, E., and Co.
May, Roberts and Co.
Thompson, Walters, Hole and Co. (Limited)
Toogood, W.

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Ford, Shandland and Co.
Math, W.
Tunbridge and Wright
Wilson & Co.

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Doulton and Co.
Mawson, Swan and Weddell
Silicated Carbon Filter Co.

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Benger's Pancreatised
Bovril (Limited)
Brand and Co.
Bragg, J. J. (Choco'l Biscuits)
Dahl's Dyspepsia Vaccine
Goodall, Backhouse and Co.
Heaton, Squire (Malted)
Liebig Co.
Mottershead & Co. (Benger's)
Nestle, H. Food
Ridge, Dr.

FORMULE

Brooks, T.

GINGER ALE

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Kimmond and Co.
Mills, R. M., and Co.

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Pink and Co.
Fuerst Bros.
Frier's Candy Co.
Van Geelkerken and Co.

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Curtis and Co.
Evans, Sons and Co.
Heaton, Squire and Francis
Hill, A. S., and Son
Kerfoot, T.
Wright, Layman and Umney

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Hyde, Nash and Co.
Knight and Co.
Levermore Ang., and Co.
Pronk, Davis and Co.

GUTTAPERCHA

Duncan, Flockhart and Co.

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Brodie, J. (Imperial Hair Dye)
Chesebrough Mnfk. Co.
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Oldfield, Pattinson and Co.
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Newball and Mason (Extract of Herbs)
Potter and Clarke (Extract of Herbs)
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Butcher, W., and Co.
Epps, J., and Co.
Gould, E., and Son
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Leath and Ross
Thompson and Capper
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Wilkinson, A., and Sons

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Hay, W.

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Dunn and Co.
Fellows
Fletcher, Fletcher and Co.
Symes and Co.
Tyske and King

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London Homoeopathia

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Evans Sons and Co.
Godfrey and Cooke
Maw, Son and Thompson, S.
Toogood, W.

INSECTICIDES

Maw, Son and Thompson, S.
Sanford
Steiner and Co.
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INK [See MARKING]

Bewley and Draper
Duncan, Flockhart and Co.

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KETCHUP

Tyrer, P.

LAMPS

The Wenhams Co. (Limited)

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Fitch and Nottingham
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Newsome, C.
Robinson and Sons
Seabury and Johnson

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Raines and Co.
Rendell and Co.
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Hollroyd & Co. (Limited)
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Pontifex and Wood
Werner and Pfeiderer

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Andreas, Oscar, and Co.
Bish, W., Son and Co.
Dinneford
Henry, T. and W. (Calcedine)
Hill and Sons, A. S.
Hockin, Wilson & Co. (Citrates)
Kerfoot, T. (Citrates)
Murray, Sir James, and Son
Southwell, C., & Co. (Citrates)

MALT EXTRACT, &c.

Burroughs, Wellcome and Co.
Heaton, Squire and Francis
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Hickinson, J.

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Day, Son and Hewitt (Veterinary)
Day and Sons (Veterinary)

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Shirley, Proprietor
Cooking and Co.
Hockin, Wilson and Co.
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Shirley, A. W.

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Howards and Sons
May and Baker

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Harvey, J. & W., and Co.
Jones and Co.
Phillips, G., and Co.

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Robbins, J., and Co.

MICROSCOPES

Darton, F., and Co.
Perken, Son and Mayment

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Nestle, H. (Condensed)
Swiss Milk Co.

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MACHINERY

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Carter, J. H.
Werner and Pfeiderer

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Smith, T. and H.

MUSTARD

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Colthurst and Hargreaves
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Raphael, J., and Co.

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Burroughs, Wellcome and Co.
Chesebrough (Vaseline)
Green, S. (Singlehorn's Eye)
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Shipkoff and Co.
Treatt, R. C.

PAPAIN FINELER

Kuhn, B.

PEPSINE, &c.

Burroughs, Wellcome and Co.
Claridge and Co.
Fletcher, Fletcher & Stevenson
Newbery (Inglavin)
Werner and Co. (Inglavin)
Zimmermann

PARALDEHYDE

Zimmermann, A. and M.

PATENT AGENTS

Horn and Son

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Albert and Co.
Armbricht, Nelson and Co.
Atkinson and Barber (Infanz)
Preserv)

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Crouch, F. B. (Waters)
Dahl's Dyspepsia Cakes
Edwards and Son
Evans, Lecher and Webb
Fennings' (Powders)
Goodall, Backhouse and Co.
Holloway (Pills and Oint.)
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Kemp, W. H.
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Laird (Phosphodyne, &c.)
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Mason, W. B. R.
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Blondeau and Co.
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Chesebrough Manufacturing Co.
Chisholm, R. and Co.
Colgate and Co.
Cook, E., & Co.
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Dee Oil Co. (Limited)
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Ferguson, W. K.
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Greensill, T. S., and Son
Johnson and Co.
Mack, H.
Mann, C. A., and Co.
Maw, Son and Thompson
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1 and 3 KING EDWARD STREET,

LONDON, E.C., September, 1889.

WE desire to intimate that the preparation of our Catalogue for the coming year, 1890—the tenth annual issue—is already commenced.

Copy will be placed in the printer's hands in good time for the work to be in circulation early in 1890.

This notice is issued in order that Manufacturers of goods imported and sold by us may forward timely notice of intended alterations and additions.

"NEWBERY'S CATALOGUE" is widely circulated, and, therefore, well known in all parts of the Commercial World. The current year's issue comprises nearly 600 pages of information of use to Druggists, Medicine Vendors, &c., in addition to the Medicine Act and observations thereon, whilst the corrections, additions, &c., as compared with the former issue, are upwards of 1,500.

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Agents for British and Foreign Medicines and Proprietary Goods.

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Special Pharmaceutical and other useful preparations, artistically labelled, and, where desired, with Chemist's own name and address. For full list see Pamphlet, "List of Counter Adjuncts," supplied gratis on receipt of Business Card.

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OCTOBER 5th.

[1889.

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Antipyrin Tabloids, 5 gr., supplied to the trade in Bottles of 25 and 100 at 18s. and 54s. per doz. Antipyrin, in Powder and Crystals, at 3s. 5d. per oz.

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Sulphur has been used in medicine for centuries, its great drawback being a suitable mode of administration. In the form of Compressed Tabloids, combined with the pleasant acidulous cream of tartar, as suggested by Sir Alfred Garrod, the most fastidious patients do not object to its use as a medicine. Its exhibition has been attended with success in morbid conditions of the alimentary canal and pulmonary passages, cystitis and diseases of the urinary tract, affections of the skin and mucous membranes, chronic articular diseases, and morbid conditions of the muscular system.

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GLYCERINE SUPPOSITORIES (B. W. & CO.) IN CHRONIC CONSTIPATION.

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Lanoline (Liebreich) is the purified fat obtained from sheep's wool, and is natural to the hair and skin, and is absorbed by these at once. It is the best basis known for ointments, salves, &c. It is perfectly miscible with water and all medicaments. Of desirable consistence, it does not melt below body heat, and does not "run" like ordinary ointments. Free from odour, homogeneous, and devoid of hard crystalline bodies and free fatty acids, it is bland, soothing and acceptable in the most irritable conditions of the skin.



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A Pamphlet on the "Place of Lanoline in Pharmacy" will be sent post free to any chemist on request.

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Sulphonal was discovered by Professor Baumann, of Freiburg University, and first prepared by Friedrich Bayer & Co., Elberfeld, Germany. Its physiological and pathological effects were first ascertained by Prof. Kast, of Freiburg University, who discovered and studied the hypnotic action. Since then it has been the subject of numerous trials and experiments by many eminent and experienced physicians, whose testimony is unanimously favourable.

Sulphonal is not a narcotic like morphine, but acts by giving rest to the cells of the cerebral cortex, thereby causing sleep. The drug is best administered at bed-time in the form of Tabloids of Compressed Sulphonal dissolved in warm fluids, *e.g.*, soup, tea, coffee, cocoa, etc., as when placed in the liquids they disintegrate and easily pass into the circulation.

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Sulphonal-Bayer supplied to the Trade in Crystals at 1s. 6d. per oz. (subject to fluctuation).



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GUIDES TO THE PARIS EXHIBITION—FREE TO CHEMISTS.

We have still a few copies left, which we shall be pleased to supply to Chemists who intend visiting the Exhibition, or who would like to have a copy to lay on a chair or on the counter, where customers may peruse it while waiting for goods. The Guides, which are handsomely illustrated, are generally considered the best of their kind. On the back of the cover of the "Bemrose Guide" is our advertisement of the Lanoline Toilet preparations, and in a similar position of the "Pall Mall Guide" will be found our advertisement of the Lundborg Perfumes. We shall be happy to send a copy of either of these Guides to any Chemist in the United Kingdom free of charge, or in care of some Wholesale House.

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5 COLEMAN ST., LONDON.



ESTABLISHED 1859.

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Published every Saturday.

Subscription 10s. per year, payable in advance; dating from the commencement of any month.

Supplied only to persons connected with the Trade.

Post free to every country in the world. Single copies 4d. each.

Cheques or Postal Orders should be payable to EDWARD HALSE, Ltd crossed MARTIN & Co.

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The Pharmaceutical Society of New South Wales.

The Midland Pharmaceutical Association of New Zealand.

The Pharmaceutical Society of Queensland.

The Pharmaceutical Society of South Australia.

The Hobart Chemists' Association.

The Launceston Pharmaceutical Association.

South African Pharmaceutical Association.

For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

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PUBLISHER'S NOTICE.—We are now preparing THE CHEMISTS' AND DRUGGISTS' DIARY for 1890, and in order to supply our numerous subscribers in the Australasian Colonies before the new year we must go to press before the end of this month. Advertisements in this work are before the drug world all through the year, and the book being now established as an encyclopædic reference-book on thousands of drug-dealers' desks, its value as an advertising medium is unsurpassable. Firms who wish to have a place in its pages are requested to communicate with the publisher without delay.

UNQUALIFIED ASSISTANTS.—We have reason to believe that Mr. Braxton Hicks, the Mid-Surrey Coroner, has sent the letter which he threatened to the Pharmaceutical Council in reference to the sale of vermin-killer to a young girl by an unqualified chemist's assistant at Wandsworth. No public reference to it, however, transpired at the meeting of the Council on Wednesday.

CASCARA SAGRADA.—Our New York correspondent writes on September 20 as follows:—The wonderful increase in the consumption of this bark has placed it in the front rank as the most used of our American drugs, and from present indications its popularity is destined to increase. Ten years ago the export demand was certainly not more than ten tons a year, while this year it will be at least 200 tons. It is doubtful if any other medicine has made such extraordinary progress in the time. The demand in the States is also on the increase, and, although it has not made such rapid strides as in Europe, it must be borne in mind that for many years before it was introduced into England it was highly popular with the medical profession of this country. Though originally collected in the north of California, the great bulk of the bark of commerce now comes from Oregon. Southern Oregon sends to-day the largest quantity, but the districts from which supplies reach the market are gradually tending northwards, for, owing to the wasteful system of collecting the bark, the trees are destroyed, and it is stated as a fact that in a few years at most it will be as scarce in Oregon as it is at present in California. The great scarcity during the early part of the present year greatly stimulated the collection, for new bark was received in this market as early as May, while in the ordinary course it would not arrive till August. The collectors were greatly disappointed at the price their bark realised. They were under the impression that they would get at least 1s. 6d. per lb., but it is doubtful if these early arrivals realised more than 70s. per cwt. This, however, did not dishearten the collectors in Oregon, and it is to be presumed that, on the principle that quantity would make up for low prices, they kept at work, with the result that about 400 tons was gathered in Southern Oregon alone, and prices went down to 45s., leaving about 5c. per lb. to the gatherers. Long before this the collectors in Northern Oregon and Washington Territory had retired from the field. Wages are high in the remote districts of the latter, and more profitable employment than the collection of cascara could easily be found. The total quantity of bark marketed from Washington Territory did not reach 50 tons. The collection came to an end in August, and, although the great bulk of the manufacturers had already secured their annual supplies (and some of them more than that), there were a good many who, judging there would not be a demand for all the bark gathered, had held off, in the hope of lower prices, now finding the market advancing, all came together to make their purchases, with the result that prices have risen within the last ten days 50 per cent., and all the inferior bark that was a drug in the market a month ago has been disposed of. The dealers in San Francisco appear to have contracted for considerable quantities, which they now find great difficulty in securing, and as they at present refuse to book any more orders, or offer bark at any reasonable price, some parties think there is no more cascara to be had, and speculators who already had secured large stocks foster this view, hoping to unload at a big profit. There is still a large quantity of cascara stored away in the producing districts, and there are also ample stocks all over the country; most of the consumers are supplied, and, although low prices will not be seen—for the position does not warrant it—there is no probability of the market going much higher unless reckless speculation sets in. Some of the collectors are holding their bark for 1s. per lb., but in a little time, when they find it may not be possible to get this, they will be glad to sell at the market value. Sales were made here this week at equal to 70s. per cwt. c.i.f. London, but not for export. The position is quite different from last year, for then there was a *bona-fide* scarcity of bark; now there is plenty of cascara, but dealers and speculators hope to see things take the course they did a year ago. If consumers will remain quiet, and not rush into the market, thus playing into the hands of speculators, they will get all the bark they require later on at reasonable prices, but not under 70s. per cwt.

The question of the superiority of thin bark over thick is no longer a subject of discussion in this market. The leading manufacturers give no preference, stipulating only for the bark to be sound and well dried. As a matter of fact, the so-called thick bark is got off the same tree as the thin, and very fine thin bark arrived here from Washington Territory this year, a district that was supposed to supply only thick bark.

Metropolitan Reports.

THE PANPHARMACON MAN.—Mr. James P. Dowling, of 11 York Road, Battersea, who came before the Wandsworth Court the previous week on a summons by his wife for maintenance, as reported in our last, re-appeared on Friday last at the same court, to complain to Mr. Mead, the magistrate, of his wife, who, he said, was in the habit of dispensing medicines, although she was not properly qualified. Mr. Mead: are you qualified yourself? Applicant: I am sufficiently educated to be able to dispense. Mr. Mead: You don't hold a diploma, and a man must have other qualifications besides education to enable him to dispense medicine. Applicant: I hold American qualifications. Mr. Mead (severely): It hardly rests with you to complain of your wife when you are not qualified yourself. The Applicant: But my wife is insane. Mr. Mead: That is another matter. With reference to the dispensing question, you had better make your complaint, if you have any, to the Pharmaceutical Society. If she is insane you had better purchase the last Act of Parliament relating to lunacy, and proceed under that. The applicant then retired.

CONDENSED SKIMMED MILK.—A case was brought up for hearing before Mr. Biron, Q.C., at Lambeth, on Tuesday last, in the form of a summons against an oilman named White, carrying on business at Camberwell, for selling condensed milk, which was alleged to be not of the quality represented. Dr. Bernays, the analyst for Camberwell, showed that 90 per cent. of the cream had been abstracted from the milk. Mr. White, in defence, stated that he told the inspector the milk from which the preparation was made was partly skimmed, and also that he called the attention of the officer to the label on the tins, which described the article as follows: "The Standard brand is specially prepared from the richest cows' milk, from which a portion of the cream has been removed, and nothing added but cane-sugar. It is better and cheaper than fresh milk for ordinary purposes. Five parts of water to one of milk, and for infants 8 to 15 parts of water, according to age." Mr. Biron, the magistrate, said such food, so diluted, would not be fit food for infants. The defendant stated that he sold the milk in question, and other brands, at 3d., 4d., 4½d., and 5½d. Some legal arguments followed on points of law. Mr. Biron said it was an important and difficult case, but he felt bound to convict, although at the same time he was fully satisfied the defendant was not to blame, and had no intention to defraud. He should, therefore, be willing to grant a case for the points to be argued in a superior Court. He considered the sale was one to the prejudice of the purchaser under the Act, and he therefore ordered the defendant to pay a fine of 20s., and 6l. 8s. costs. Notice of appeal was given.

THE FIRE AT MESSRS. BURROUGHS, WELLCOME & CO.'S LABORATORY.—On Friday, September 27, Mr. A. Braxton Hicks, the Mid-Surrey Coroner, resumed the inquiry at the Town Hall, Wandsworth, relative to the death of William Godfrey Jacobs, aged 27, second-class fireman, attached to the Metropolitan Fire Brigade, who lost his life at a fire at Messrs. Burroughs, Wellcome & Co.'s, manufacturing chemists, Bell Lane, Wandsworth, on September 12. Mr. Sexton Simmonds, second officer of the brigade, attended as assessor to assist the coroner; Captain H. E. Davis attended at the request of the coroner as expert; Mr. Roger W. Wallace, barrister, together with Messrs. Markby, Stewart & Co., solicitors, attended for the firm; and Inspector Shaw watched the case on behalf of the police. One of the windows, with its iron stanchions, the firemen's axes, and certain chemicals were put in as exhibits, and the case created considerable interest. Plans of the interior were shown, and evidence was given by several of the employés of the firm. Annie Burke, who had been filling peptonised powders into tubes, took a basin of the powder into the drying-room just before she went to dinner. She placed the basin on a shelf in front of the window opposite the door. Dr. Percy Smith, managing chemist to the firm, said the powders contained bicarbonate of soda, and

being asked by the jury if this was combustible, the Coroner said he had a report from the Home Office, which he would read later on.

Mary Julia Barrows (assistant forewoman), Florence Mary Bass (forewoman in charge of the tabloid room), and Maud Woolridge stated what they had seen. Mr. Wellcome showed the jury some tabloids, and explained what they were. Edward George Boorer, who in the morning had filled some bottles with chlorate of potass out of the trays in the drying-room, said he might have spilt some of the material. It sometimes was spilt, and got into the cracks of the floor. The workpeople wore slippers of list or indiarubber. There were only two things he knew of in the drying-room—chlorate of potass and effervescing powders, of the composition of which he was ignorant. Hermann Belthle, who was in charge of the pressing machines for making the tabloids, said that in the drying-room there were empty bottles, chlorate of potass, effervescing powders, a little ammonia chlorate in powder, and some voice-powders, composed of chlorate of potass, borax, and cocaine. There was also a cask, half-full of chlorate of potass and borax, mixed. It was clean waste powder, and harmless. They had had a little fire there once before—last November—but he could not tell what caused it. At that time they were wearing boots with nails in them, and it was supposed that they caused the fire by friction. After that occurrence strict orders were issued that they were only to wear list or indiarubber slippers.

They dried sugar in the drying-room sometimes, not in large quantities. Never more than six or eight kilogrammes. There was no sugar there that day. The gas-stove used in the large workroom was turned out when they went to dinner. No person was allowed to light the gases, save the person deputed to do so in each department, and they were not allowed to use anything but safety matches.

Mr. Wallis here obtained leave to hand in, and the Coroner read, a long letter, dated January 10, 1889, from Mr. Wellcome to Dr. Smith, by way of instruction, in which the doctor, as manager, was urgently pressed to see that every precaution was taken against fire, even to an excessive degree. Certain definite instructions were laid down, and directions left to adopt any other precautions which he could think of. Dr. Smith said he faithfully carried out those instructions, which were made known to all the staff. Dr. Smith also said that since the last examination he had been making experiments as to the result of heat applied to chlorate of potass, and found that it was neither explosive nor inflammable under the action of heat. At 685° Fah. it would decompose and give off oxygen gas. He then by the aid of a spirit lamp burnt some chlorate of potass, which simply disappeared, giving off a slight vapour. If mixed with inflammable substances it might take fire. Pure chlorate of potass was quite harmless.

The Coroner: But this was not pure; it was mixed with borax.

Witness: Yes; the borax would act as a deterrent.

At the request of the foreman, who handed in some composition consisting of 2 parts chlorate of potass and 1 part sugar, the witness exposed it to the same heat, when it went off with a flash.

The Coroner then stated that he had communicated with the Home Office, and Mr. Leigh Pemberton had replied stating that Colonel Ford, who had visited the factory, reported that no manufacture was carried on which would come under the Explosives Act. Dr. Dupré had been communicated with, and found that while chlorate of potass would burn furiously when set on fire in bulk, none of the chemicals submitted to him would explode under ordinary circumstances, and that therefore it was not necessary to send anyone down from the Home Office. The Home Office, however, would do their best to assist the Coroner if he required further information.

Witness, further examined by the Coroner, said he would not like to say if the head of a safety match coming into contact with the material would cause combustion. It certainly would not cause explosion. It was very hot that day. The sun's rays passing through the southern window would fall on some bottles placed on the window-sill, and strike the floor at the point where Copeland saw the fire. Copeland, who was examined on the first day, was recalled, and said he had omitted to state that he was wearing boots in direct opposition to the instructions. He also now stated that after he

saw the flame he opened the door, which was in direct contradiction of his previous evidence.

Mr. Thomas Smith, local surveyor, gave evidence as to the factory exits.

Mr. G. Redgrave, inspector of factories for Kent, Surrey, and Sussex, said he had seen the premises that were burned down, and had no complaints as to the place.

William Howard, the engineer in charge of the fire-station, recalled, was questioned as to the state of the fire when he went on to the second floor. He said fire was dropping through that floor on to the first floor. He went down, and two minutes afterwards heard of the two men's retreat being cut off, and tried to get at them, but failed. He had not apprehended any danger to them when he left them, and did not think they would have been in peril but for the fire breaking through the floor. He knew there was no one on the premises, and that there was therefore no danger to life; and he would have placed them in a safer position if he had thought them in peril. Again questioned, witness said he was told of their retreat being cut off only half a minute after he left them.

By the jury: The staircase was not ignited, but the flame was too great around it to allow of my going to them, or of their coming down. There were four ladders on the engine. I did not take the escape from the station because I knew it could not be used where the fire occurred. The window was 27 feet from the ground, and the ladder was 23 feet 3 inches long altogether.

The Coroner: Could you not have attached it to the builder's ladder?

Witness: Well, I was not there, sir, at the time. I did not smell anything beyond the usual odour of burning wood. There could have been no reason for the men not using their axes to break the window frame, except their being suddenly overcome. Their axes would easily have done it. They only called for help three or four minutes. It is a cast-iron frame. The window out of which Ashby escaped was afterwards broken. He is still in the infirmary.

The Coroner said it was very desirable to hear Ashby's evidence, and to obtain this they had better adjourn.

It was stated that the skin on the man's legs was still very bad.

Mr. Coleman, recalled, at the request of Mr. Wallace, said there were now fused remains of bottles on the window-sill which had been placed there to dry.

The inquiry was then adjourned to 11 o'clock on October 11.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

BIRMINGHAM.

THE EARLY CLOSING COMMITTEE are desirous of continuing the practice of closing at 4 P.M. Wednesdays all through the winter, except during the month of December, and it is hoped and believed that next year the time may be prolonged, viz., from 2 P.M.

MASON'S COLLEGE.—The annual gathering at which the prizes are distributed to the students at Mason's College was held on Tuesday, when Professor Heath delivered an address to the students and their friends. Dr. Gibbs Blake took the chair.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.—The inaugural address will be delivered by the president, W. F. Wyley, Esq., J.P., F.C.S., at the conversazione to be held at the Midland Hotel, New Street, Birmingham, on Tuesday, October 8, 1889.

LEICESTER.

TECHNICAL CLASSES.—The council of the Leicester and Leicestershire Chemists' Association have made arrangements for the following classes during the winter session, commencing on October 15:—"Practical Pharmaceutical

Chemistry," by Mr. H. Evans, on Wednesday evenings, at 8.30 P.M., in the laboratory of the Wyggeston Technical School; fee, 10s. for the course. "Materia Medica," by Mr. W. James, Ph.C., on Tuesday evenings, at 8.45 P.M., at St. George's Chambers; free to associates. "Elementary Chemistry," by Mr. G. Ward, on Friday evenings, at 8.45 P.M., at St. George's Chambers; free to associates. The prizes gained in the last session are to be distributed by Mr. J. G. F. Richardson at the Masonic Hall, Leicester, on Thursday, October 10. This ceremony will be followed by a ball at 9.30 P.M. This may turn out to be a very sensational affair, as the committee make the extraordinary announcement—"Dress optional."

LIVERPOOL.

WORKHOUSE CONTRACT.—Messrs. Evans, Sons & Co. have contracted for the supply of drugs, chemicals, &c., to the workhouse infirmary for the ensuing year.

LITERARY AND PHILOSOPHICAL SOCIETY.—A new session will commence on Monday, October 7, and the meetings will continue fortnightly until the end of April next.

MICROSCOPICAL SOCIETY.—The sixth ordinary meeting will be held on Friday, October 4, when a paper will be read on "The Freshwater Mussel" by Mr. W. H. Read, illustrated by the oxy-hydrogen lantern, after which the meeting will resolve itself into a conversazione.

MEDICAL INSTITUTION.—The fifty-first session will open on Thursday, October 10, and the meetings will be continued weekly until April 24. On November 14, December 12, January 23, February 20, and March 20 the meetings will be devoted to microscopical science only. The secretary for ordinary meetings is Dr. Damar Harrison, 53 Rodney Street; for the microscopical section, Dr. Barron, 31 Rodney Street.

UNIVERSITY COLLEGE.—The College and School of Medicine will commence a new session this week with a goodly number of students. The lectures in physics will be delivered by Professor Oliver Lodge, F.R.S., &c., and in chemistry by Professor J. Campbell Brown, D.Sc., &c. The practical chemistry students will commence work on Saturday, October 5.

POISONING BY CARBOLIC ACID.—An inquiry was held by Mr. Clarke Aspinall on Tuesday last relative to the death of a woman who had been locked up on a charge of being drunk, and had died in the police cell. After she left her sister's house the previous Saturday, a bottle was found which had contained carbolie acid, and it was supposed she drank the contents. The post-mortem examination showed the immediate cause of death was due to carbolie poisoning, and a verdict was returned to that effect.

MANCHESTER.

THE Owens College was opened for the session on Wednesday last. The chemistry classes have obtained 300 members. Included in this number are a few pharmaceutical students.

WAKEFIELD.

INFERIOR MEDICINES.—Mr. Henry Hall, grocer, &c., was summoned, under the Sale of Food and Drugs Act, at the West Riding Police Court, on Tuesday last, for having sold to an inspector sweet spirit of nitre alleged to have been not of the substance and quality required. Mr. A. H. Allen, the West Riding analyst, certified that the sample in question was very deficient in real nitrous ether, the most important constituent of sweet spirit of nitre. Instead of containing 1.8 he found only 0.1 per cent. Mr. Allen, however, was of opinion that the weakness of the sample was probably due to prolonged and improper keeping. The defendant declared he sold the nitre exactly as he received it from the wholesale chemist, Mr. Walter Moorhouse, of Wakefield, and that gentleman also asserted he supplied it to the defendant as he received it from the manufacturers a few days previously. The bench, in dismissing the case, said it was important that dealers should carefully watch their drugs, otherwise they might unknowingly sell them under the strength required

for medicinal purposes. Mr. Hall was further charged with selling paregoric which was not of the proper strength, and the case being proved, he was fined 1s. and costs.

IRELAND.

THE PHARMACEUTICAL COUNCIL.—Wednesday last was the fixed date for the monthly meeting of the Council of the Pharmaceutical Society, but a quorum not being forthcoming, no meeting was formed.

Two branch dispensaries are about to be opened at Clough.

MR. J. GUNNING has been appointed dispensary officer to the Aclare Dispensary, *vice* Dr. McGloin, resigned.

MR. J. D. KELLY has been appointed dispensary officer to the Ballinrobe dispensary district.

THE Dublin Registrar-General, in his last week's report, conveyed the alarming intelligence that the death-rate in the Irish metropolis was the highest in the three kingdoms.

MR. T. A. CONNELLAN, Jervis Street Hospital, Dublin, has been elected dispensary officer to the Ballyfarnan district, *vice* Dr. Dillon Barrett, deceased.

TENDERS for a year's supply of drugs and medicines to the Galway Union and several dispensaries attached are invited not later than October 9.

ARRANGEMENTS for the amalgamation of the Ledwich and Carmichael schools of medicine are now completed, the deeds being signed by the proprietors.

THE Recorder of Cork, in a case before him last week, made some severe strictures on the mistaken policy of railway and public companies in Ireland charging excessive rates for carriage of goods, thereby hindering the development of trade.

THE Dublin Railway and Canal Rates Association have issued invitations to the public bodies throughout Ireland to a general conference on railway and canal rates, to be held on October 8 in the council room of the Royal Dublin Society.

PHARMACEUTICAL CHANGES.—MR. W. LILLEY, L.P.S.I., has been appointed manager of Dr. Hadden's Medical Hall, Skibbereen. MR. E. HILL, M.P.S.I., has resigned his position at Messrs. Brooks, Lower Baggot Street, Dublin, and Mr. W. Davis has been appointed warehouse manager of the Dublin Apothecaries' Hall.

"WHERE nature fails, art steps in," says the saw, and so also says Mr. Edmondson, pharmaceutical chemist, Rathmines, whose plan of covering the dexter side of the modest *denarii* with a miniature advertisement of his "miraculous" oil is both novel and inexpensive, and likely to be imitated by not a few in the trade.

A VAN-MAN in the employ of Messrs. McMaster, Hodgson & Co., chemists and druggists, Capel Street, Dublin, was last week killed by a fall from his dray. In returning a verdict, the coroner's jury strongly condemned the conduct of the Jervis Street Hospital officials in sending away the injured man. Public opinion is, however, divided on the merits of the case.

AT Middleton, last week, the plate-glass front of Dr. O'Brien's apothecary establishment was destroyed by the wanton conduct of a soldier, who, in addition to kicking out the shop windows, drew a knife on the assistant when remonstrated with. When arrested he naïvely excused himself by stating he wished to leave the army.

OVERHEARD outside Dublin chemist's window, inside which a liberal display of sponges attracts the undivided attention of two Irish sons of the soil. First patriot, with conviction: "To be coorse they are dead animals." Second ditto, a champion of the vegetable creed: "'Gorra, Mike, then how do they live?" "Shure, you ignoramus, they fade on sponge-cake!"

INDEFATIGABLE PUFFERS.—*Appropos* of the recent crusade against sensational trade announcements, it is an interesting fact that, for the past twelve months or so, the greater part of the Dublin professional advertisements have been monopolised by the dental craft, whose notices this week amounted to

the greater part of a hundred. This, in a small city, speaks well for cutting rivals.

THE FOURTEENTH ANNUAL MEETING of the Pharmaceutical Society of Ireland will be held at 11 Harcourt Street, Dublin, on Monday next, October 7, at 7.30 p.m. The following seven members of the Council retire by rotation:—Messrs. William Hayes (Dublin), William Nassau Allen (Dublin), Charles R. C. Tichborne, LL.D. (Dublin), Alexander Elliott Doran (Bray), J. C. C. Payne (Belfast), G. H. Grindley (Dublin), Charles Evans (Dublin). Messrs. Allen and Payne do not seek re-election. The following are new candidates:—Mr. Andrew McNaught, M.P.S.I., Queen's Bridge, Belfast, nominated by Messrs. Wm. Prott and G. A. Webb; Mr. Johnston Montgomery, M.P.S.I., Royal Avenue, Belfast, nominated by Messrs. W. C. Dobbin and P. J. Lyons; and Mr. Thomas J. English, M.P.S.I., 15 Rathgar Road, Dublin, nominated by Messrs. A. Reynor and B. J. Costello.

SCOTLAND.

DUNDEE.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.—There was an influential gathering of the chemists of this town and their employés in Speed's Hall, Commercial Street, on Thursday evening, to inaugurate the first session of the young association. For the occasion Mr. Wm. Gilmour, F.R.S.E., of Edinburgh, chairman of the executive of the North British Branch, had agreed to deliver an address, and he was accompanied by Mr. J. Rutherford Hill, assistant-secretary of the Pharmaceutical Society. Ex-Bailie Doig, an honorary vice-president of the association, presided, and after a few introductory remarks from him, Mr. Gilmour proceeded to deliver his address, in which he spoke of the importance of association amongst young chemists, especially as a means of fostering good-will and encouraging education. The greater part of the address was taken up with the latter subject, and the speaker had a word to say on behalf of the educational facilities provided in the local University College. At the conclusion of the address, which was listened to with great interest, Mr. D. M. Skinner (vice-president) moved a vote of thanks to Mr. Gilmour, and a similar compliment was, on the motion of Mr. T. C. Henderson, paid to wholesale chemists, local chemists, and others who have given the association financial assistance. Speeches were also delivered by several of the seniors. The syllabus for the session is an excellent one. There are to be weekly meetings from now until the end of March, with an interval between December 16 and January 16. Thirteen nights will be devoted to papers and two to debates. There will be four social evenings.

GLASGOW.

THE office-bearers of the Senior Chemists' Association are making an effort to galvanize it into activity, with the object of having a few meetings during the ensuing winter.

THE LABORATORY COMPANY is the grandiose but scarcely apposite style of showy premises in Argyll Street, in which, according to prominent advertisements, a business of the store species is to be conducted.

METHYLATED SPIRIT DRINKING.—MR. A. L. BRUCE, speaking from the chair at the annual dinner of the Scottish Wine and Spirit Trade Defence Association, remarked that the liquor traffic incurred much unmerited reproach on account of a gross form of sottishness, for which it was not really responsible. He referred to the degrading practice of methylated spirit and finish drinking, which obtained to a frightful extent in Glasgow and other large Scotch towns. In justice to the druggist, Mr. Bruce might have explained that the sale of the articles in question, for such purposes, is confined almost exclusively to oil and colour salesmen and small doctor's shops.

THERE are some curious "natural" things in the United States, but the best we have heard of for a long time is a "just discovered" mine of natural shoe-blackening. The material is moist and soft, and when used as a shoe-blackening produces a fine polish, which is not easily destroyed. An analysis shows that it contains 16 per cent. carbon, 34 per cent. aluminium, and the remainder clay.

General and Provincial News.

WINE LICENCES have been granted to Mr. G. F. Clifton, chemist, 14 Fleet Street, Bury, and to Mr. Pennington, chemist, 14 Bolton Street, Bury.

LADY MILNE, wife of Admiral Sir Alex. Milne, died in Edinburgh this week from the effects of nitrous oxide gas, which was being administered to her by a dentist.

WHO CAN BEAT THIS?—Messrs. J. S. Fry & Sons, the eminent cocoa and chocolate manufacturers, of Bristol and London, inform us that the gold medal obtained by them at the Paris Exhibition makes the forty-first prize-medal which has been awarded to them for their products.

CRICKET.—As a winding up of the cricketing season the employés of Messrs. R. Sumner & Co. had an enjoyable gathering at the Royal Assembly Rooms, Breck Road. After refreshments at eight o'clock, a musical entertainment, and subsequently dancing, were indulged in.

THE RAIMES & CO. CLUB, Edinburgh, finished a successful season on September 21 by defeating the Mayfield by 67 to 23. Out of twenty-three fixtures eighteen were played, and of that number nine were won, five lost, and four drawn, as against nine lost and five won during the previous year. The best average is held by Mr. Yellowlees with 9.10.

MORE LAW WANTED.—At the Sanitary Congress at Worcester Mr. Charles Cassall read a paper on adulteration, which, he maintained, was very largely practised. He was of opinion there should be an alteration in the law, to restrict the sale by manufacturers of food, drugs, patent medicines, and dress materials containing poisonous matters.

THE CHEMISTS' ASSISTANTS' ASSOCIATION of London will resume its meetings on Thursday evening next at nine o'clock at 103 Great Russell Street, W.C., when Mr. T. A. Ellwood, F.C.S., A.I.C., will deliver an address. The councillors of the Association are speaking hopefully of the prospects of the session, and the programme is, we understand, a good one.

CARBOLIC-ACID POISONING.—An inquest has been held at Brixton respecting the death of Mrs. Mary Kernaghan, of Grove Road. Mrs. Kernaghan had absented herself from home during the previous ten days. She returned on Thursday of last week, and on Friday morning procured from the lavatory, where it was kept for disinfecting purposes, a large bottle of carbolic acid. She took the bottle upstairs and drank about a quarter of its contents. Dr. McMullen, of Brixton, was at once called in, but the deceased died about an hour afterwards.—On Wednesday last an inquest was held at Paddington on the body of a woman named Bridget Lyons, who had died from carbolic poisoning. The deceased was found lying on the floor of her room on the previous Saturday in an insensible condition, and with her mouth very much charred. She was at once removed to St. Mary's Hospital, but died half an hour after admission. It transpired that she had drunk a quantity of carbolic acid, which was kept in the house for disinfecting purposes. We also report a case of carbolic poisoning in our Liverpool news.

ELLIMAN'S EMBROCATION.—Messrs. Newbery & Sons send us a note referring to the new circular which is being sent to retailers of patent medicines by the wholesale houses referring to Elliman's embrocation. According to this circular buyers from Messrs. Elliman direct will bind themselves not to sell to any retailer who will not agree to maintain at least the minimum prices fixed. Messrs. Newbery say they have decided to adopt Messrs. Elliman's plan as revised, which they regard as the logical outcome of the earlier agreement. They think it right to abstain at this juncture from any expression of opinion as to its ultimate prospects.

POISONING CASES.—Keep a thing long enough and it will come in useful. Mrs. Christiana Gilliard, of Crediton, aged 72, and whose mind was affected, found some arsenic in a cupboard, which had been there for over thirty years, and was labelled, "W. Searle, High Street, Crediton. Arsenic—Poison." She took some of it, and soon died.—An inquest held at Morecambe last week raised a question as to the risk involved in taking homœopathic pilules. A boy named Harold Cunliffe, 11 years of age, who was staying with his

parents at Morecambe, went out for a walk on the Sunday previously, and ate some fruit from the hedges. He became ill, and on the Monday his mother gave him a few belladonna pilules, but afterwards had medical assistance. The little boy died the next morning, apparently from belladonna poisoning. On the authority of the doctor, who gave evidence, the jury came to the conclusion that the poisoning was not a result of the pilules, but more probably of the fruit eaten on the Sunday.

HOMŒOPATHY IN AUSTRALIA.—The *Homœopathic Review* says there are ten qualified medical men practising homœopathically in Melbourne, nearly as many in Sydney, and a smaller number in Adelaide. The Homœopathic Hospital in Melbourne has 140 beds, and is the third most important hospital in the colony. Messrs. Martin & Pleasance, the leading homœopathic pharmacists in Melbourne, are about to erect a new pharmacy in Collins Street, which will cost over 15,000*l*. Mr. Butcher, homœopathic chemist, of Blackheath, England, has been making a tour through the colonies, combining business with pleasure, and expresses himself highly gratified with the result in both respects.

Trade Notes.

THE allotment notes for the first issue of shares in Bidwell Brothers (Limited), toilet-brush manufacturers, Axminster and Ottery St. Mary, were posted on the evening of September 27.

ST. JOHN'S PANDERMIC OINTMENT (LIMITED).—Capital, 10,000*l*. in 10*l*. shares. Objects, to acquire and deal in certain patent medicines known as St. John's Pandemic Ointment and Pills. Registered without articles of association.

MESSRS. FORD, SHAPLAND & Co. inform us that a fair number of designs for circulars have been received in response to their offer of 15*l*. in prizes. These are now in the hands of the judges, who are:—Mr. F. W. Fletcher, F.C.S. (of the firm of Fletcher, Fletcher & Stevenson), and Mr. J. Robert Brown, an artist on the *Graphic* staff.

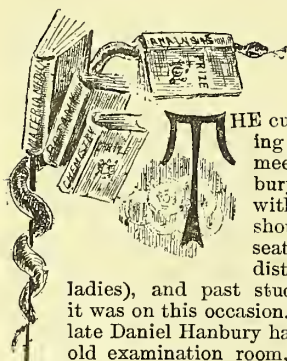
PENNY QUININE is one of the outcomes of the nineteenth-century progress. It is offered to the trade by Mr. Rivers Hicks, of Savage Gardens, Tower Hill, E.C. For the penny purchasers get 8 grains of quinine, in pill form, attractively done up, with directions suited for the natives of tropical climates.

MESSRS. ZIMMER & Co., of Frankfort-on-the-Main and Stuttgart, have sent us their new list of drugs and chemicals, which they are now publishing in a greatly extended form. We note that among their numerous quinine preparations, quinine perles and quinine-chocolate tablets, containing 1 grain of sulphate of quinine each, now find a place. To their list is added an interesting statement relating to the varieties of cinchona barks and seeds which the firm exhibited at the recent conference of German naturalists and physicians.

JEYES' SANITARY COMPOUNDS COMPANY (LIMITED), the manufacturers of lanocrocin and creolin gauze, to which we referred last week in connection with Messrs. Burroughs, Wellcome & Co.'s name, tell us that the lanocrocin, or unguentum creolin, contains 5 per cent. of the antiseptic, and that it is put up in collapsible tubes, so that it may be kept sterile. It is used by obstetricians, who employ it for anointing the hands. It is a good dressing for ulcers, burns, &c. The company are highly encouraged with the reception which creolin has had by medical men in this country, and report to us some recent public acknowledgments of its virtues.

"CHICHA," a South American drink, made by the fermentation of malted maize, with the addition of the leaves of the *primum payaca*, or "sandino," as it is called in the country, when taken in excess as a beverage produces a feeling of extreme weariness, rendering the patients totally unfit to follow any kind of employment. The effects differ from ordinary alcoholism.

Pharmaceutical Society of Great Britain.



OPENING OF THE SESSION.

THE custom is that on the first evening of the winter's session of meetings the hall of 17 Bloomsbury Square should be decorated with living plants, that the theatre should be similarly enlivened, and seats be reserved for the Council, distinguished visitors (including ladies), and past students of the school. And so it was on this occasion. Moreover, the portrait of the late Daniel Hanbury had been brought down from the old examination room, and found a fitting position under a canopy of crimson cloth behind the President's chair. All but the reserved seats were occupied a few minutes past eight o'clock, and little standing room was left. The house was packed by 8.30, when the President, accompanied by Professor Planchon, Mr. Thomas Hanbury, Dr. W. J. Russell, President of the Chemical Society, and Mr. Bottle, with other members of the Council, came into the room. After the applause which this *entrée* created had subsided,

The PRESIDENT proceeded to the work of the evening, expressing regret that Professor John Marshall had been attacked with a very severe cold, and had lost his voice, so that he would not be able to deliver his address. In his absence that duty would fall to another.

A SESSION'S WORK.

Dr. ATTFIELD, the senior professor of the school, then came forward to report upon the work done in the chemical laboratory during last session. He said that there were two examinations, one at the end of the winter session in March, the other at the end of the summer session in July. Out of 84 students 20 competed in the first, and 16 in the second. The bronze medal for the winter session's work had been gained by George Sydney Fuller with 85 per cent. of marks, and the certificates of honour by Thomas Woodruff, 81 per cent., and John Brooks Thornley, 77 per cent. of marks. The examination at the end of the session was more difficult, and consisted of work in quantitative analysis. The first prize had been gained by a gentleman whose name the meeting would hear several times that night, and who, he was pleased to say, would be associated with him as a laboratory demonstrator in the place of Mr. Edmund White. He referred to Mr. Fuge, who took the premier position with 96 per cent. of marks. (Applause.) Following him were Messrs. Thornley (90 per cent.), Norman (88 per cent.), and G. S. Fuller (85 per cent.), who richly deserved their rewards. (Applause.)

Professor DUNSTAN, in reporting upon the chemistry and physics class, referred to the change which was last year initiated in the school curriculum by the substitution of an elementary and an advanced course for two courses of the same nature in the course of the session. The new plan had worked extremely well. Those who knew the amount of chemical science which was now required of pharmaceutical students would appreciate his statement that there was a great difficulty in attempting to properly deal with the subject in a five months' course. (Hear, hear.) While the change had been an improvement, it had had one remarkable effect, for it had made it possible for a man who worked well to get the two medals. That had actually taken place this year. Mr. John Brooks Thornley had secured the bronze medal for the winter's work and the silver medal for the work of the whole session. The others who had successfully competed were Messrs. Fuge, Alfred Latchmore, and R. H. Norman, who would obtain certificates of honour for the winter course; and similar certificates would go to Messrs. Fuge, Norman, and Lewis Ough for the session's work. These students richly deserved the distinction, for the examination was by no means an easy one, since it represented the three sides of the science, viz. physics and inor-

ganic and organic chemistry. He would be sorry to encourage the idea that medals were the end of a career, for he regarded them rather as the stimuli to future exertions (hear, hear); and in this connection he would have been glad to be able to say that Mr. Thornley was to continue his career in research work, but owing to his health breaking down he had to leave the country for Australia.

Professor GREEN, in reporting on the botany class, agreed with what the previous speaker had said regarding the rearrangement of the curriculum, and remarked that in his department the change had resulted in more of the students going in for the whole ten months' course. Looking over the work of the past session, he felt that it had been done as well as could have been expected. In his class there were men of different calibre: while some had parts, others had obtained his good opinion by sheer hard work. The prize-takers in his class were:—Messrs. Fuge (bronze medal), Latchmore and W. T. Jones (certificates), in the first half; and in the session Messrs. Fuge (silver medal), Ough, Latchmore, and Jones (certificates). He was pleased that the Redwood scholar (Mr. W. T. Jones) had come out so well, and thought that they might congratulate themselves on the establishment of the scholarship and this its first-fruits. (Applause.) Professor Green proceeded to speak of the work of the session, mentioning that he has secured the assistance of Mr. Fuge as his demonstrator, and stating that one of the best workers and manipulators last session was a Mr. Smith, although he did not happen to be so fortunate as his fellow-students in the class examinations. He next reported upon the herbarium prize competition, the silver medal in which was awarded to Mr. W. F. E. Horrell, who had sent in a herbarium of 531 specimens. This deserved great commendation, for the specimens had been mounted with much care, and with an intelligent regard to showing their typical characters. The second herbarium, sent in by Mr. G. J. Monger, contained 337 specimens, and showed very good work, which deserved the bronze medal. The third, for which a certificate was granted, contained 467 specimens, and was sent by Mr. A. W. Willmott. Professor Green, in calling attention to the fact that the second herbarium contained fewer specimens than the third, remarked that it gave him an opportunity of saying that the awards should not be made in respect to the number of specimens which were collected. (Hear, hear.) Young collectors thought that it was no use sending in a herbarium except there was a large number in it, and if they allowed this opinion to continue, he thought they encouraged plant-collectors rather than true botanists. He strongly objected to that idea. Mr. Horrell would still have got the silver medal if he had sent in only half the number of specimens. It was the excellence of the mounting which had secured him the distinction. He therefore suggested that a limit might be put on the number, and that greater importance should be attached to the manner in which the specimens were mounted, also that preference should be given to medicinal plants. Finally, he congratulated Mr. Edmund White on his appointment as pharmacist to St. Thomas's Hospital.

Mr. E. M. HOLMES very briefly gave the results of the examinations for the medals in the *materia medica* class. Mr. Fuge had gained the bronze medal with full marks, and Mr. Clement J. Wain had by consistent and persevering hard work secured the silver medal at the end of the session.

Mr. JOSEPH INCE, the lecturer on pharmacy, stated that Mr. Fuge had also gained the bronze medal in his class, and Mr. Norman the silver one. The fact that both these gentlemen were Bell scholars gave Mr. Ince the opportunity of saying that their success was due to a liberal education—the best preparation for any profession, and equally so for pharmacy. (Applause.)

PRESENTATION OF PRIZES.

The President performed this function, and as usual the recipients—most of whom personally responded to the call—were warmly cheered when they came up to the table, Mr. Fuge getting an exceptionally enthusiastic reception, as well as a copy of Hanbury's "Science Papers," Mr. Thornley, as the other silver medalist, also getting a copy of this volume. The President explained that these books were presented by Mr. Thomas Hanbury in memory of his brother.

THE BLUE RIBBON.

Still there were more reports to come. The President explained the origin of the Council prizes examinations, and called upon Mr. Bowen, one of those who conducted the examination in July, to report thereon. This Mr. Bowen did in a few sentences, and said that the successful men had done very good work, and all were students of the Society's school, and two of them Bell scholars. The awards were as follows:—

Pereira Medal (Silver), and books value 5*l.*, presented by Mr. T. H. Hills—Harry Dixon Fuge.

Pharmaceutical Society's Medal (Silver), and books value 3*l.*, presented by Mr. T. H. Hills—Alfred Mander.

Pharmaceutical Society's Medal (Bronze), and books value 2*l.*, presented by Mr. T. H. Hills—Lewis Ough.

The President, in presenting Mr. Fuge with his award, said that the Pereira medal was the greatest distinction in pharmacy, and in presence of that distinguished audience he desired to congratulate Mr. Fuge on the honours which he had gained. His name would be added to the list of distinguished men who had gained the Pereira medal, and he trusted that he would be long spared to do good work for pharmacy. (Applause.) Mr. Carteighe made choice remarks to Messrs. Mander and Ough, and this function over he called for

THE SCHOLARSHIPS REPORT.

First explaining their origin in regard to the Redwood scholarship, he said that it was quite unique to have such a thing during the life of the man in whose honour it was founded, and here was the man, their young friend Professor Redwood (who sat before the President's chair) at 43 (laughter)—or was it 83?—present to see the scholarship awarded for the second time. (Applause.)

Mr. J. E. SAUL, who, with Mr. Tanner, conducted the examination, said that the competition this year was a decidedly good one, both as to the number of candidates and the quality of papers. The number had previously been exceeded in one year only, and that would not have been the case had it not been for the melancholy fact that one of the candidates who intended to compete had lost his life in endeavouring to rescue two children from drowning. He referred to Mr. E. G. Wilson, of Oxford. It was a matter of considerable regret to him that Scotland had not been represented in the examination. All the important centres of England were represented, but in Scotland there was not a single candidate, and on looking back he found that there had been only two candidates during the past five years. He would say candidly that this reflected on Scotland—a nation celebrated for its students, many of whom had done good work, and it was a pity that they should show such disregard for these valuable scholarships.

The awards were:—The Jacob Bell Memorial Scholarships to Charles Ernest Boucher, Bristol, and Harry William Kilby Pears, Brighton; and the Redwood Scholarship to Edward Birchall Sherlock, Liverpool.

The first two on coming forward were presented with sets of text-books, given by Mr. Thomas Hyde Hills, for the Redwood scholar. There was nothing but a shake of the venerable professor's hand, and this was given heartily amidst an outburst of cheering that will be green in Mr. Sherlock's memory when class-books are tattered and torn.

THE PRESIDENT then called upon Professor Attfield to read Professor Marshall's

INAUGURAL SESSIONAL ADDRESS.

INTRODUCTORY.—Mr. President, Ladies and Gentlemen,—When, a few days since, I perused the addresses which had been delivered in this theatre on five similar occasions to the present one, dealing with various questions of interest in relation to your Society, I realised the seriousness of the duty which I had perhaps somewhat hastily consented to undertake. But when, having read those discourses, each so excellent in its way, I laid them aside and turned to that solid volume, your Calendar for 1889, I took heart of grace; for I speedily discovered that if my own words should fail, I might appeal to the silent eloquence of that substantial record. Moreover when, under the guidance of your President, I had visited this pharmaceutical habitation with its ever-expanding accommodation, I felt, as a practical

educationist, that I could hardly fail to find some fit topics wherewith to occupy the brief moments at my disposal.

PAST HISTORY.—Not yet quite half a century ago the actual foundation of your Society was laid within the memory of many still living, but it is easy to imagine that its conception in the minds of its distinguished founders was not the impulse of a moment, but the thought and hope of many antecedent years. I need not here record the names of those energetic pioneers, so familiar to us all, nor will I venture to particularise any of them at the cost of those whom I might wrongly omit to mention, but I must be allowed to express my sincere admiration of their sagacity, prevision, and prudence in not attempting to compass all their manifest intentions at once, in keeping themselves free from the fetters of premature restrictions, and in manifesting a sure confidence in the future growth of their infant institution. Corporate interests and commercial advantages they assuredly appreciated and sought after; but from the earliest period of their labours, to their credit and merit be it recorded, they recognised the grave public interests involved in their undertaking, and also the sacred trust that would be incidentally placed in their hands of promoting, advancing, and diffusing the special knowledges connected with their useful, necessary, and honourable calling.



PROFESSOR JOHN MARSHALL, F.R.S., F.R.C.S., &c.,
President of the General Medical Council.

In swaddling clothes, as a private Society, from 1841 to 1843, it was in the last-named year invested with the protective mantle of a royal charter, and since that period its existence and utility have been deservedly recognised by the Legislature in the important Acts of 1852 and 1868. But its restless craving for improvement is not yet satisfied, and a new "Pharmacy Bill" has made its appearance in Parliament, destined in time, it is to be hoped, to be transformed into an Act which, like its predecessors, has for its aim the improvement of the professional education, and thence of the social status, of the alumni of your popular and flourishing Society.

To the more restless and indefatigable of your members, the progress thus made in the development of your institution may seem to have been too slow; but, I would ask, what is half a century in the career of a new public body? and, again, what in so comparatively brief a period have you not already accomplished?

PRESENT STATE.—Reverting to your Calendar for full information as to your present condition, I find the record of continued and strenuous efforts crowned with marked—I would almost say with improbable—success. To meet the growing exigencies of your educational work, your home with its manifold adaptations, has been gradually expanded

and is now again being expanded, not only in a vertical, but in a lateral direction. The old technical laboratories, once large enough for the former classes of students, are now relegated to other uses, whilst much larger and more commodious rooms, fitted with improved and more abundant apparatus, have been provided; and, again, besides the separate accommodation thus set free for advanced pupils and other individual workers, each professor and lecturer has now his ample and suitably-furnished laboratory department. The various collections, chemical, botanical, and pharmaceutical, the last-named being unique of its kind, are separately and suitably disposed, and so arranged as to be available for the lectures, or for practical instruction, or for private study, whilst a methodised *materia medica* collection is open, not only to your own school, but to medical students proper on the recommendation of their respective teachers. The library, of ample extent, and in special directions of great excellence, is, under most liberal and yet safe rules, accessible to students from so early an hour as 9 A.M. until so late an hour as 10 P.M.; nor is this all, for it is, with certain exceptions, a lending library, even to members of the Society residing in the provinces. Lastly, I must not omit here to record the fact that the North British Branch of your Society, established in Edinburgh, has not long since been improved in its accommodation, and has met with continued success.

To all these apparently adequate provisions for sound and good scientific and practical teaching I must add the ample supply of incentives to continuous effort on the part of your students, in the form of prizes and other rewards for distinctive merit of various degrees.

Finally, let me note that from the earliest stage of your existence a Benevolent Fund has been created for the kindly purpose of assisting your less fortunate brethren or their bereaved and destitute families.

ACTION OF THE SOCIETY.—I pass on now to note that all this inanimate machinery, built up, however, under the direction of living and enthusiastic minds, has had, and continues to have, a lifelike energy and movement imparted to it by a succession of well-known and often famous professors, lecturers, and students; its work has been tested by your examiners, and the action of your entire educational system has been regulated by an evidently wise and sympathetic Council.

It would ill become me, so much a stranger to your affairs, to appraise the merit of any one of the many personal agencies which have been or which are now engaged in your particular educational field; but I must be allowed to offer my opinion that you have already gathered in a goodly harvest.

I speak not alone of the stimulus you may have given by your highest distinctions to original or otherwise valuable and elaborate research; but I would say, as a member of my own profession and as one of the body politic of this great country, it is no idle boast to proclaim that of the 14,000 individuals whose names are inscribed on your Register, about half, *i.e.* 7,000, have passed either your Major or your Minor examinations.

Now this observation leads me naturally to turn to consider the special function which we are called upon to witness and to participate in to-day; I mean the award of honours to those who have just been tested in their respective departments of study, and have distinguished themselves by special merit as to their scientific knowledge or their technical skill.

I need hardly say that I desire to offer the successful candidates my sincere congratulations, to which, I am sure, I may add those of the Council, the professors, and the lecturers, on having earned these hard-won distinctions. I may remind them that the receipt of such honours assuredly involves future responsibilities, not to be lightly set aside or carelessly neglected. All prize-winners are marked men, and their future career does not pass by unobserved. Early rewards received at the hands of an honoured public institution are not only a recompense for past exertions, but should be regarded as pledging their recipients to future efforts for the maintenance of the reputation not only of the individual, but of the Society under whose training they have been earned. Nor, rightly considered, should those who have only relatively failed in a competition for a necessarily limited number of prizes be held exempt from the same obli-

gation, for even in regard to them it is impossible to overrate the value of their methodical training and their individual efforts to succeed, nor the general beneficial effect of the race which they have run against others just a little more successful in their scientific and technical contest.

FUTURE PROGRESS.—I now turn to the future, for to an institution like this a future is of necessity in store, and it will be laden with good or evil according as its living agencies may shape its onward course.

It is not for me to intrude my opinions on those debatable questions which involve the commercial interests of the members of your Society—such, for example, as relate to the competition between co-operative trade associations and private establishments—to the necessity which exists in the former case for attaching definite personal responsibility in regard to the purity of drugs, the accuracy of dispensing, and the sale of dangerous poisons—and, again, to the question of the desirability of the State obtaining a source of income from the sale of patented medicines.

But I may be allowed to express, as the representative of the General Medical Council, the sympathy of that body towards every endeavour and every practical suggestion which made be made by this Society with a view of improving the British Pharmacopœia, the responsibility for framing and publishing which is by law vested in that Council. Hence comes a direct and continuous encouragement to your legitimate aims of advancing pharmacology as a science, and of promoting pharmacy as an art.

The immediate object of your Society is, as I understand it, to afford the means of a perfect education, general, scientific and technical, to all your future members and associates—so that each and all may attain to a high state of culture, knowledge, and efficiency. Your past history shows that you will not halt in your efforts, but will even yet improve in your methods and in your results.

To this end your future students, many of whom, unhappily, are outside the sphere of your influence and guidance, and must often be imperfectly informed as to the fittest course for them to pursue in regard to their education, should seek early in their career some friendly and trustworthy advice. It might not be beyond the scope of the duty of your Society itself to circulate very widely a brief pamphlet, containing advice especially intended for those who are still in the apprenticeship stage. It should be strongly insisted upon that a good preliminary general education is absolutely necessary to all who aspire to be really accomplished pharmacists, and to be worthy members or associates of your body. It is of the greatest moment, moreover, that the general education of which I have spoken should really be in name, as in fact, preliminary; and therefore the needful examination tests in it should be passed before the systematic scientific training is commenced; whilst this, again, should, if possible, precede the special technical work. It must, of course, be granted that this last recommendation cannot always be followed; but, if not, at least the scientific habit and scientific mode of thought should be invariably inculcated, even by the practical teacher, as the ever leading and essential guides by which to interpret and illuminate the simplest technical procedure. In this way the humblest task is elevated; manual dexterity and mental improvement advance together; and every process thus watched and every result thus accomplished will yield the reward of intellectual satisfaction, and will excite the pardonable emotions of pride and triumph which spring from the dutiful and successful performance of the humblest work. Finally, I would urge in the most positive manner that not only socially, but professionally, the greatest probability of real success in life will fall to those who have had the most liberal as well as the best scientific and technical education.

On the most interesting, but perplexing, questions relating to EXAMINATIONS, I am not now prepared to enter at any length. That examinations cannot be abandoned is clear; that there are evils connected with them is obvious; and hence the conclusion is evident that it is the business of examining bodies and examiners to investigate the charges against them and to aim at their improvement. That some examinations may be too feeble, and others too severe, must also be true; for examining boards will differ as to what is the proper mean. A due admixture of the systematic and the practical form of examinations is absolutely needful, for

theoretical questions cannot well be answered *virâ voce*, and all technical work must be directly tested. The more of the latter the better, and yet not at the expense of the former. Longer time may be required; but the results will be more satisfactory and more fair. Besides this, "cram" will sink to a minimum, and be even beneficial, for it must take the practical form of doing actual work. I am a strong advocate for the introduction of what are called "outside" or "co-adjutor" examiners; but this only in co-operation with the institutional teachers, who best know the aims and the extent of the preceding education. Of course this remark applies specially to bodies which both teach and examine, and thus it is surely applicable to your own Society. In regard to purely examining bodies, no particular training institution or school should be over-represented on the examining board. In all cases two examiners at least should work together at every part of the subject. As to the subjects which are to be examined in at each time, they are often too many or are too severely represented; either practice is a serious source of overstrain, as well as of illegitimate and unhealthy "cram." If the subjects at each examination were fewer, if schedules in certain otherwise enormous subjects were adopted, and if the examinations were more prolonged and practical, "tutors," not "crammers," would take and keep the field.

I cannot close this address without offering your Society my warmest congratulations on the establishment of its research laboratory. It will undoubtedly prove useful, nay, indispensable, to many an advanced student, who, whether trained within your own walls or elsewhere, may aspire to lend his aid in endeavouring to promote real knowledge in ever so simple, yet unexplored, corner of chemical or pharmaceutical research. But what I would specially refer to is the encouragement which you now offer to the higher and more elaborate and more difficult prosecution of inquiries in what is understood as pure science; undertaken for science's sake. Pharmaceutical chemistry, and through it pharmacology, has before it, in the domains of nature, both inorganic and organic, never-ending problems, concerning the constitution and action of remedial substances, which nothing but the highest and most prolonged investigation can pretend to solve. In such inquiries the physiologist must take his share; but in your own sphere of investigation they invite you to reap a rich reward, not only in an increased reputation with the outside scientific world, but in the realisation of a corporate pride arising from your own augmented influence, in the increased reliance of the public upon your opinion and guidance, and, I doubt not, in that progressive success which all must desire for you.

Permit me to thank you for the opportunity and the honour of thus being able to address you, and to assure you that I have not meant to flatter, but to encourage; and so I conclude with congratulating all, your President and Council, your professors and lecturers, your members and Associates, and, lastly, your pupils, both past and present, on your actually accomplished successes, and I venture to prophesy for you that future prosperity which is the invariable reward of lofty aims followed by harmonious and vigorous acts.

VOTE OF THANKS.

Mr. BOTTLE, in proposing a vote of thanks to Professor Marshall for his address, said it was a pleasant task that was imposed upon him, and he felt it an honour to ask them to accord to the Professor their thanks for the very comprehensive address he had prepared. They thanked him as President of the Medical Council for the sympathy he had shown them in their work, and also for his remarks as to the probable future of the Society. He was sure they would all feel sympathy with Professor Marshall in his present ailment, which deprived them of his presence that evening, and accord him their hearty thanks for his address, and best hopes that he might soon be restored to health and long-continued labours. (Applause.)

Dr. RUSSELL (President of the Chemical Society), in seconding the vote of thanks, said he supposed they had called upon him, an outsider, so as to get an opinion with regard to the address from somebody unconnected with their immediate Society. He had listened to the address with very great interest, and it appeared to him to have been exceedingly well prepared. Professor Marshall had kept to the subject which was of most interest to all present, and certainly as an

outsider he heard the address with great interest. It was not for him to criticise, but at the same time he could not refrain from making one remark with regard to examinations. He thought that was one of the burning questions of the day for them, and he considered Professor Marshall's remarks thereon of the greatest importance, coming as they did from one who had considered the subject very deeply. The address had greatly interested him, and, as he sympathised very strongly with the remarks it contained, he begged to second the vote of thanks to Professor Marshall. (Applause.)

The vote of thanks was accorded with acclamation.

PRESENTATION OF THE HANBURY MEDAL.

The PRESIDENT, in presenting the Hanbury Medal to Professor Planchon, said the late Daniel Hanbury was one of the earliest students in the school of pharmacy, and the medal which he had the honour of presenting that evening was founded by a number of friends, pharmaceutical, scientific, and medical, to commemorate his memory. When the Fund was started the subscriptions were so numerous, and the desire to show appreciation and sympathy with the work Daniel Hanbury had done, not only for pharmacy and for Pharmacology, but for the whole profession of science, was so great, that the subscriptions had to be limited. (Applause.) The result was that they had a handsome sum, and it was deputed to the Council of the Pharmaceutical Society to carry out the trust. By the terms of the trust it was directed that there should be presented biennially to the most distinguished professor in materia medica in its widest sense, not only in the British Islands, but in any kingdom, a gold medal of a certain value. The conditions laid down with regard to that bequest were very particular and very definite, in order to prevent any confusion of the privileges which might be involved in its adjudication. It was decided that, besides the president of the Pharmaceutical Society and the British Pharmaceutical Conference, and another pharmaceutical chemist nominated by them, the presidents of the Chemical and Linnean Societies should assist to adjudicate the award. The adjudicators thus represented in the widest sense the societies which dealt with the work that Hanbury was so deeply interested in. The President of the Linnean Society was unable to be present that evening, but he sent his homage to the recipient of the medal and his congratulations to his *confrère* Professor Planchon. The other adjudicators were present to assist at the interesting ceremony, and he had to report that as the result of the labours of the Commission the award this year had been made to a distinguished Frenchman, Professor Gustave Planchon. (Applause.) If it was a great honour for them as Englishmen to have to do with the award, it was a still greater honour when the recipient, being of another nation, was able, and had the courage to come over to receive it in person. Professor Planchon was a great authority upon the subject at which Daniel Hanbury had worked with heart and soul. Hanbury had been the colleague of many then present, but unfortunately he died while yet a comparatively young man. If Hanbury had been present, and he (the President) felt he was present in spirit, he was sure he would have felt highly gratified that the medal should be awarded to Professor Planchon. Those who had received it in the past were Professor Flückiger, the first recipient; the second, Mr. Elliott Howard; the third, Professor Dragendorff; and the fourth, Professor Dymock, whom they might almost call an Anglo-Indian, as so much of his life had been spent in the East. Now they came to face the subject as represented in that great kingdom of France. Professor Planchon was not only a great man of science in his own country, but a very great authority all over the world on this subject. Those who prosecuted the study were well acquainted with Professor Planchon's work on materia medica. His papers thereon would alone have been sufficient to justify any Commission in awarding the medal to their author. Professor Planchon was interested in science in its pharmaceutical aspect throughout the whole of France. He was Director of the School of Pharmacy in Paris, which was a governmental institution. In fact, in France pharmacy was recognised as one of the liberal professions, and requiring a liberal education, and a student went to a section of a university to become a pharmacist. Professor Planchon, as Director of the School of Pharmacy and a Government official, was associated with

public instruction in France in all that pertained to scientific education, especially in biology. It was his duty to look after the examinations on these subjects for the State—the examination of boys. He had said enough to prove to them that the Commission had not been wrong in giving the medal to Professor Planchon, and he would only ask them to show by their acclamation that they admired his courage in coming over to England to receive the medal. (Loud applause.)

The PRESIDENT then turned to Professor Planchon, and, speaking in French, said he had the honour to present him with the Hanbury medal, and with it expressed the respect of the representatives of the scientific and pharmaceutical societies.

M. Planchon read the following reply:—

Monsieur le Président, Mesdames et Messieurs,—Je regrette de ne pas pouvoir vous dire dans votre propre langue combien je suis heureux de me trouver au milieu de vous en pareille circonstance. Rien ne pouvait me flatter davantage que le choix de votre commission, composée d'hommes dont l'indépendance et l'autorité ne peuvent être contestées par personne, et c'est là pour les quelques efforts que j'ai fait pour l'avancement de la matière médicale une consécration bien précieuse et un bien grand encouragement. C'est aussi une grande satisfaction de voir mon nom associé aux pharmacologistes distingués qui ont reçu la même médaille—Flückiger, le digne collaborateur de Hanbury, auquel me tient depuis longtemps une bonne amitié; Howard, si dévoué à la science, et qui m'a fourni avec une courtoisie charmante de si précieuse matière pour mes études sur les quinquinas; Dragendorff et Dymock, que je n'ai pas le plaisir de connaître personnellement, mais dont je suis appelé à consulter journellement les travaux sur la chimie des drogues ou sur la pharmacopée de l'Inde. A ces sentiments d'une naturelle fierté vient s'en joindre un autre plus intime, une vraie satisfaction de cœur, provoquée par le nom de la médaille que j'ose de recevoir. Daniel Hanbury était l'ornement de votre société, qu'il a honoré par sa science et par son caractère; il vous appartient tout entier; mais toutes les sociétés du Continent auraient été heureuses de l'avoir avec elles, et nous en particulier, société de Paris, nous le considérons comme l'un des nôtres. Il avait été l'ami très fidèle, le correspondant très assidu de Guibourt, qui lui ressemblait par la conscience de ses recherches et par l'amour du bien; plus tard il avait bien voulu me donner à moi-même à diverses reprises des témoignages d'estime et d'affection, et tous à Paris nous l'entourions de la plus vive sympathie et nous écoutions avec le plus affectueux intérêt les communications qu'il venait nous faire. Son souvenir est toujours resté vivant parmi nous, et ajoute, aux yeux de notre société, un grand attrait au prix donné en son nom. C'est pourquoi je vous remercie de tout cœur, les membres de la commission qui me l'ont attribué, le bureau de la société qui m'a fait l'accueil le plus gracieux, vous tous qui voulez bien vous y associer. Enfin à ces remerciements permettez-moi de joindre les vœux et les salutations des deux institutions auxquelles je dois rapporter une part de mon succès aujourd'hui; car, si vous avez couronné les modestes travaux du savant, vous avez aussi voulu honorer l'Ecole de Pharmacie de Paris dans la personne de l'un de ses professeurs et de son directeur, et la Société de Pharmacie dans celle de son secrétaire général.

[TRANSLATION.]

Mr. President, Ladies, and Gentlemen,—I regret that I cannot tell you in your own language how happy I am to find myself among you on this occasion. Nothing could be more gratifying to me than the selection of your committee, composed as it is of men whose independence and authority cannot be disputed; and this is, for the few efforts that I have made for the advancement of materia medica, a most precious consecration and a very great encouragement. It is, moreover, a great satisfaction to see my name associated with the distinguished pharmacologists who have received the same medal—Flückiger, the worthy co-worker with Hanbury, and with whom I have long enjoyed a pleasant friendship; Howard, so devoted to science, and to whose kind courtesy I am indebted for valuable material for my studies of the cinchonas; Dragendorff and Dymock, whom I have not the pleasure to know personally, but whose works on the chemistry of drugs or on the Indian pharmaco-

pœia I have to consult daily. To these sentiments of natural pride another and a closer is now joined—a real and hearty satisfaction provoked by the name of the medal which I have ventured to accept. Daniel Hanbury was the ornament of your society, which he has honoured by his science and by his character. He is yours entirely; but all the societies on the Continent would have gladly had him with them. We especially, the Society of Paris, regarded him as one of ourselves. He was the faithful friend and the untiring correspondent of Guibourt, who resembled him by the conscientiousness of his investigations and by his moral sympathies. His memory remains a living power among us, and in the view of our Society, adds greatly to the value of the prize which bears his name. For these reasons, then, I thank you with all my heart, the members of the committee who have awarded the medal to me, the officers of the Society who have received me so kindly, and all of you who have been good enough to unite in that reception. And with my own thanks permit me to join the respects and the greetings of the two institutions to which I owe a part of my success of to-day; for if you have rewarded the modest efforts of the student you have at the same time honoured the School of Pharmacy of Paris in the person of one of its professors and of its director, and the Paris Pharmaceutical Society in that of its secretary.

The PRESIDENT, replying to Professor Planchon, said it was very proper that "La Belle France" should be represented in such a year as the present by such an extremely competent and special man. They on this side of the water felt a sympathy of the widest and most heartfelt character with those engaged in the cause in France. On many subjects, and in many respects, there were differences between the two nations, but in the interests of science and pharmacy they were one. In conclusion, he would say they owed to that kingdom a progress in science which the world had not been slow to take advantage of. (Applause.)



PROFESSOR PLANCHON,
Directeur de l'École de Pharmacie, Paris, Hanbury Medallist.

Professor Gustave Planchon was born in 1833 at Ganges (Hérault) near Montpellier. In 1859 he graduated as doctor of medicine at the Montpellier faculty, where he was a professor in 1860. Next, at the Superior School of Pharmacy, of the same city he graduated, in 1864, as pharmacist of the first class, the same year as *agrégé* professor, and coming to Paris, as Doctor of Sciences. In 1866 he was appointed professor of materia medica in the Paris School of Pharmacy, a chair left vacant by the death of Professor Guibourt, and filled by Dr. Planchon to the present day. In July, 1885, after Professor Chatin's resignation, he was by the

school faculty elected the director of the institution, and brought to the establishment peace and goodwill in place of the strife and discontent which had for some time prevailed. Many memoirs and papers have been contributed by the Professor; the following are among the most important:—"A Practical Treatise for Determining Simple Drugs of Vegetable Origin," which is a large work in two volumes, now classic; "Modifications of the Montpellier Flora"; "History of the Montpellier Tufts." His memoir "Des Quinquinas" has been translated into English for the use of cinchona-planters in India. He also supervised and partly re-wrote the sixth edition of Guibourt's classic treatise on the natural history of drugs. Personally Professor Planchon is very kind and affable, and much liked by students and all in the College.

COUNCIL MEETING.

THE Council resumed its meetings on Wednesday, after the September holiday, the whole of the members being present, except Mr. N. H. Martin and Mr. Greenish, when order was called at 11.30 A.M. The minutes were approved of, and the President proceeded to read the names of persons who desired election as associates, &c., of the Society. Owing to the near approach of the end of the year, the list was shorter than usual. The next business was the

FINANCE COMMITTEE'S REPORT,

which the Secretary read. The report was for August and September, and showed that the treasurer's balance at the end of the latter month amounted to 2,099*l.* 1*s.* on the General Fund account, 647*l.* 2*s.* 4*d.* on the Benevolent Fund account, and 42*l.* 3*s.* on the donation account. From the General fund sums amounting altogether to 2,194*l.* 8*s.* 10*d.* were recommended to be paid, including 750*l.* for current expenses in London, and 200*l.* for Edinburgh. It was noted that the prosecutions under the Pharmacy Act at Aberdeen had cost the Society 27*l.* 6*s.* 6*d.*, but against this fines and "costs" had been paid by the infringers. Research was put down at 52*l.* 10*s.* (part of the annual grant), and the bulk of the remainder of the payments consisted of quarterly salaries to the secretary, professors, and others who are paid at this period. The committee also recommended the payment of 1,000*l.* to the contractor during October, and, in order to meet expenditure in this direction, to sell out stock amounting to not more than 3,000*l.*

The PRESIDENT, in putting the motion for the adoption of the report to the meeting, said that the principal sources of income last month were examination fees, and fines and costs paid on account of Scotch prosecutions. In England there had also been, he added, several cases of infringement in which the individuals had paid more than the penalty. One of these was a very troublesome case, for the person had been proceeded against no less than five times, and had paid altogether 25*l.*, exclusive of costs of both sides. He fancied that the gentleman would draw rather a long face when he got the lawyer's bill, and he was glad to say that the prosecutions had at last proved effectual, for the person had given up his illegal trading. After speaking of some other matters referred to in the report, the President, before sitting down, told the Council that the contractor for the new buildings had neglected to put in his application for a payment to which he was entitled, so the committee were anticipating it, and while considering that they had come to the conclusion that about 3,000*l.* would be required between now and Christmas, stocks to which amount would be sold as money was required and when the best price could be obtained for them. Resuming his seat and waiting a minute or two for comment, without that being forthcoming, the President intimated that if no "member had any observations to make" [a favourite saying of Mr. Carteighe's], he would put the resolution. No observation was made, the report was adopted, and power was given to attach the seal of the Society to the power of attorney for the sale of the stock. It was slow business indeed, so far, and slower still when the Council went into committee, as it always does, on the

BENEVOLENT FUND REPORT.

The committee had on the previous night considered twelve applications for relief, ten of them seeking immediate grants and the others annuities. Five grants of 10*l.* each

were made, and one of 5*l.* Three cases were not entertained, and one was deferred for further consideration. The financial condition of the charity had been considered with a view of arriving at an understanding regarding the number of persons who might be elected as annuitants on December 4. Since the last election four annuitants have died, and the committee proposed to replace them with four others, bringing up the number to 52. They, therefore, recommended that the names of the following be put before the subscribers for the election of four of them on December 5 next:—

*Brown, Eliza
Copney, W.
Davies, S. F.

*Edwards, Hannah C.

*Mumbray, H. G.
Pitman, Emma
*Spendelow, Mary E.
Suggett, H. E.

Those marked with an asterisk were unsuccessful at the last election.

The VICE-PRESIDENT (Mr. Bottle) said that the fund would be in a similar condition at the end of this year as it was last, and the committee could not risk the election of more than four candidates. They had two names on the provisional list, and had selected two more, making, with the four unsuccessful ones, eight.

The PRESIDENT, inviting discussion, asked if the members agreed to the number proposed by the committee.

Mr. ATKINS, as a member of the committee, said he did, although he would have liked to put on six. He repeated the old, old story regarding the usefulness of the charity, and wished to press its claims upon chemists generally. It did an immense amount of good, and was deserving of the hearty support of the whole craft. It was the aim of the committee, while considering the claims of its supporters, to grant relief to the most deserving cases.

Mr. HAMPSON warmly supported these sentiments. The charity was a most excellent one, but he wished to call attention to the injustice and hardship which they subjected old and frail people to by the contest for annuities. It was not fair, he submitted, to put up a person of 81 with another of 59. Anyone with feeling could imagine what the contest would mean to a person of 81, who had but few years to live, and none of the energy and strength required to carry out a contested election. It was painful, unnecessary, and unhuman to continue this method, and he trusted that the Council would ere long take steps to appoint annuitants in a more merciful way. He did not think that voting by the subscribers was necessary; the Council was quite competent to select the most deserving individuals.

The TREASURER (Mr. Robbins) explained that if they were to elect six additional annuitants, they would so cripple the funds that they would not be able to respond so freely to the applications for casual relief.

Mr. RICHARDSON asked if Mr. Hampson meant that the committee was inhuman by proposing the election?

"No, sir," replied the President; "Mr. Hampson did not impute motives." Mr. Carteighe proceeded to say that he sympathised with Mr. Hampson, and hoped that the time would come when twice the money would be given to the fund, and to enable the Council to appoint annuitants without voting. The constituents gave the Council power to elect annuitants in certain circumstances, and it would only be an extension of the principle to do away with the voting altogether. He agreed with the Treasurer, that as half of the annuities were paid out of the annual subscriptions, it would be unwise to draw further on that source, for the casual grants were a most important part of the charity.

Mr. RICHARDSON asked if the President really meant that he would deprive the subscribers of their right of voting? That was an entirely new departure.

Mr. HARRISON (Sunderland) did not see it in that way. Mr. Hampson's proposal, with which he agreed, was simply an extension of the present powers. The idea was to extend the selection power, which the Council had, to election. Personally, he had a great objection to the general voting; very often candidates employed all their spare means in making a canvass, and if they were not successful they were worse off than they were before. He was convinced that the fund was administered with such scrupulous care that the Council could be trusted with the appointment of the most deserving persons to the annuities.

Mr. RICHARDSON said he did not mean that the Council

could not be trusted, but he thought that if the right to vote were taken away from the subscribers, the fund would suffer.

Mr. EVANS agreed with that sentiment, and pointed out that in such cases as Mr. Hampson referred to, where the individuals were not fit for a contested election, the Council could give substantial casual grants, as, for instance, in the case of the old lady of 81.

The PRESIDENT knew that, and said the Council had given grants in that and other similar cases, but he did not think it wise or kind to hold out hopes to applicants.

Mr. A. C. ABRAHAM asked if the committee had not considered the advisability of disqualifying candidates who canvassed. It was only the best off amongst them who could do that, and thus an injustice was done to the others.

Mr. CROSS could not agree with Mr. Richardson's statement that the fund would suffer. There were metropolitan charitable associations conducted as Mr. Hampson said, which were successful.

Mr. HAMPSON said it was his intention at one time to move a definite resolution regarding the matter, but he now felt that his purpose had been served by the discussion which had taken place. He was sure that if voters knew all the pain and misery which were brought upon the unhappy candidates in the process of election, they would positively be ashamed of subjecting them to it.

Mr. ATKINS here pointed out that the old lady [upon whose case the discussion really arose] had so many votes from last election to her credit that it seemed certain that she would be elected in December.

The PRESIDENT, closing the discussion, said that Mr. Abraham's suggestion had been thought of, but nothing could really be done. It should not be thought that all the money spent on canvassing came from the candidates. It often happened that benevolent friends worked and spent money to ensure their election.

Mr. HAMPSON: That is the trouble. Persons without friends cannot get the assistance.

The PRESIDENT agreed, and took that as another reason why election should be entrusted to a large and influential body. Five shillings a year from every chemist in Great Britain would bring about the reform, and in appealing for such contributions he prayed that chemists would not subject their professional brethren in their old age to indignity.

This closed the discussion, and the report was adopted.

SUNDRY MINOR MATTERS

were then brought up, amongst them the election of Mr. William Haywood ("A very good man," said the President, "whom I knew some years ago") as local secretary for Bury, Lancashire, in place of Mr. Bowker, who has gone into the medical profession. The President proposed the acceptance of a certificate of a French examining body in lieu of the Preliminary examination. He said that the certificate was for more than was required, and was on behalf of Mr. C. J. Gazeallo, a *pharmacien, la première classe*, who ought not to be subjected to the schoolboy's examination. The proposal was agreed to, after a little unimportant conversation. Then the President read a letter from Professor Planchon, thanking the Council for "the precious distinction" which had been conferred upon him in the Hanbury medal.

The Council then considered the General Purpose Committee's report in private, this being all the business.

HARTOG reports to the Academy of Sciences that he has succeeded in obtaining an anhydrous and crystallised sulphite of potash in large quantities. By the same process he has also prepared the sulphite of soda in the same form, but not in a pure state, and the double normal sulphite of potassium and soda.

HOW TO TOUGHEN PAPER.—A plan for rendering paper as tough as wood or leather, it is said, has been recently introduced on the Continent. It consists in mixing chloride of zinc with the pulp in the course of manufacture. It has been found that the greater the degree of concentration of the zinc solution the greater will be the toughness of the paper.

Legal Reports.

EXPORTING CHEMICALS.—CUSTOM OF THE TRADE.

IN the City of London Court on September 28, before Mr. H. Eardley-Wilmot, sitting as deputy judge, a case of some importance to the chemical trade was decided. Messrs. Clifford Christopherson & Co., chemical manufacturers, of 17 Great Tower Street, E.C., sought to recover the sum of 47. 19s., for chemicals supplied to the defendants, Messrs. Maconochie Bros., of East India Avenue, E.C., in the ordinary way of trade. The defence was that the chemicals were delivered too late, and were, therefore, useless, as their requirement had since ceased.

The plaintiffs' representative said they received an order from the defendants to deliver a certain parcel of chemicals to the ship *Chislehurst*, the order stating that they were to do so "as soon as convenient." No mention was made as to the date by which they were to be delivered, or the date on which the vessel would sail. The order was completed, but when the goods were sent to the docks it was found the ship had gone.

The defendants' representative said if the plaintiffs did not know when the vessel was to start it was their duty to inquire, knowing that the chemicals were for exportation.

The learned Deputy-Judge remarked that the mere fact that the plaintiffs knew the chemicals were going abroad did not put them in possession of the time when the vessel was to start. That seemed to be the defendants' contention.

The defendants' representative: They took longer than usual to execute the order.

The plaintiffs explained that the order was for a parcel of chemicals, and that a particular size case had to be specially made. The extra time occupied was in consequence of the Easter holidays intervening.

The learned Deputy-Judge observed that there was nothing stated as to time in the order by which the plaintiffs could be guided.

The plaintiffs' representative said they received the order on April 12 last, the shipping note coming three days later, and the goods were despatched on April 25.

The defendant: They took longer than usual.

The learned Deputy-Judge: He says it was a special order.

The plaintiff: The package had to be specially made. There was no specified time.

The defendants: We have offered to accept the chemicals now if they will deliver them to our warehouse.

The plaintiffs' representative: That shows they are in the wrong.

The learned Deputy-Judge said in order that the defendants might hold the plaintiffs bound by the non-delivery in time they should have brought to their notice when the ship sailed; then the plaintiffs would have known that unless delivered in time for that ship they would be of no use. As the defendants did not do that they must now accept the goods.

The defendants' representative said he wanted to put one more point before the Court before the verdict was given. The custom of the chemical trade was, that if shipping instructions were given without any date, they would inquire the date. They would not send them down at any time, as the plaintiffs had done, expecting the ship was going to stay for ever.

The plaintiffs' representative denied that that was the custom. The chemicals were now in the plaintiffs' name.

The learned Deputy-Judge said they could send them out by the next post.

Judgment was then entered for the plaintiffs for the sum claimed, and costs followed the event.

PRESCRIBING LIABILITIES.

AT the Lewes County Court on Tuesday, before his Honour Judge Martineau, the case of "Adames v Saxby" was heard. The real plaintiff was Ernest Gribbon Adames, but he being a minor sued through a friend. The defendant was Henry Saxby, chemist, High Street, Lewes. The plaintiff claimed 10*l.* 10*s.* 6*d.* as damages for the death of his dog through the defendant's negligence. Mr. Holt appeared for the

plaintiff and Mr. F. E. Hillman for the defendant. Ernest Gribbon Adames said that on August 3 he asked defendant to make him up a pill for his dog—a wire-haired fox terrier bitch—which had been shut up for a few days. On the Sunday morning the witness gave the dog the pill which the defendant had supplied, and shut the animal up in the kennel. On going to the kennel five minutes afterwards he found the dog foaming at the mouth. He let it loose, but soon it lay down flat; its legs were stiff, its mouth was wide open, its back was drawn up, and it appeared to be in great agony. About thirty or forty minutes after the pill had been given the dog died. Previous to this the dog had been in good health. Cross-examined the witness said that he gave 30s. or 2l. for the dog; he had had it four years. The pill was intended for opening medicine, as the dog had been shut up for several days. The dog did not vomit, nor was the froth stained with blood. W. Parsons, a lad in plaintiff's employ, corroborated the plaintiff's evidence. Mr. R. A. Stock, M.R.C.V.S.L., said that he had made a post-mortem examination of the dog. The stomach was intensely inflamed, but all the other organs were healthy; in fact with the exception of the stomach it was the healthiest dog he had ever opened, and he had opened a great many. In his opinion the cause of death was an irritant poison, most probably arsenic. In cross-examination witness said that five grains of arsenic would kill a dog in forty minutes, and the symptoms would show themselves in five or ten minutes. The effect was more rapid in a dog than in any other animal. He would not swear that it was a case of arsenic poisoning. Had the dose been twenty grains of aloes and two grains of sulphate of iron mixed up with a moistening of ginger, and had it been given on an empty stomach, it would probably have produced inflammation of the stomach. This concluded the evidence for the plaintiff. For the defence, Mr. Hillman said that the defendant had put no arsenic in the pill, and if the dog had taken arsenic it must have got it elsewhere. His Honour having suggested that the defendant was liable, Mr. Hillman contended that 10l. was an excessive amount for plaintiff to ask. Mr. Saxby, the defendant, said that there was nothing in the medicine that he could imagine would cause death. It consisted of 20 grains of aloes, 2 grains of sulphate of iron, with a moistening of ginger. That was not much for a dog. It was the dose given in a veterinary book which he had at home. He would not give more than 5 to 10 grains of aloes to a man. Mr. Stock said that the witness was quite right; a dog could take a good deal more aloes than a man; 20 grains were not too much. Mr. Saxby, continuing, said that the plaintiff came in and asked him for some opening medicine, as the dog was costive. He could not understand the dog dying from the effects of the pill. It must have had inflammation at the time the pill was given. Witness had been a chemist since 1852, and had never had a complaint. The arsenic was kept in the cellar. Mr. Holt argued that either the defendant gave too large a quantity of aloes or else some other ingredients got mixed. His Honour said he did not see why the defendant should go out of his way to put arsenic in the pill, as arsenic was not a purgative. He supposed it was the same with dogs as with men—what was wholesome to one was poison to another. He had known a judge of the High Court thrown into convulsions by a lump of sugar. (Laughter.) He came to the conclusion that the pill caused death; he was of opinion that there was no arsenic in it, but simply aloes and sulphate of iron, with a little ginger; he thought the dose of aloes large, but it did not appear so large as to entitle the plaintiff to recover on the ground that the defendant was negligent; there would, therefore, be judgment for the defendant, with costs.

BANKRUPTCY REPORTS.

Re JOSEPH LAING, Stapenhill, Burton-on-Trent, Drug and General Store Keeper.

THIS was a summary case. A statement of accounts has been published by the Official Receiver, which shows that the machinery, stock, and furniture, which the debtor estimated at 191l. 10s., realised 67l. 7s. 9d. His book debts, estimated by him to produce 18l. 18s. 5d., actually realised 14l. 15s. A reversionary interest in a will, which the debtor estimated to be worthless, realised 306l. 17s. The net realisa-

tions amounted to 388l. 19s. 9d. The total costs of realisation amounted to 68l. 3s. 11d.; 4l. had been allowed to the debtor, and a dividend of 12s. 7d. in the pound has been paid on debts proved to the amount of 449l. 13s. 10d., besides 33l. 14s. 2d. paid to preferential creditors.

Re ALFRED PRINCE PRESTON, Middlesborough. Chemist.

THIS debtor attended at the Stockton-on-Tees Bankruptcy Court to pass his public examination on Sept. 30, and, in answer to the Official Receiver, stated that he first started business as a chemist and druggist at Abingdon, in 1870, without any capital. He carried on business there till 1885, when he failed, his assets being valued at 390l., and his deficit amounting to something like 1,500l. A composition of 4s. in the pound was accepted, and his brother guaranteed it, the whole of the debtor's assets being assigned to his brother to realise the composition. After that failure he went to Middlesborough, where he became manager for a soda-water manufacturer, but in January 1888 he commenced business as a chemist and druggist. When he then started he had no assets whatever, nor did he owe anything. He now owed 563l. 9s. 8d., and estimated his assets at 200l. 14s. 3d. To enable him to start in Middlesborough his brother lent him 65l., and now he owed his brother altogether 180l. He also owed nearly 400l. for goods supplied, and he put down his present stock as having cost 120l., and the only debts owing to him amounted to 7s. 3d. His books would show how his stock had gone. When he was at Abingdon his life was insured for 850l. under three policies. More policies were assigned to his brother in consideration of his paying the dividend of 4s. in the pound.

Examined by Mr. Tennet for a creditor, the debtor said he believed he had shown a document he had got from Abingdon to Mr. Tennet and a Mr. Tinkle, but denied that he had said he was going to get some money from his mother, or that he was not going to wait till she died. He had no recollection of saying that his brother and he were even going to get 250l. advanced.

Further examined by the Official Receiver, the debtor said he had been secretary of the Conservative Club at Middlesborough.

By Mr. Tennet: Did you take the Conservative Club money? Did you use it?

Debtor: Yes, I did, temporarily.

Official Receiver: Have you handed over all moneys that you received?

Debtor: Yes, sir.

Official Receiver: You don't owe anything?

Debtor: Not a penny piece.

The examination was adjourned.

Gazette.

PARTNERSHIPS DISSOLVED.

Macdougall & Lediard, Carlisle, physicians, surgeons, and general practitioners.

Smith & Mawdsley, Pentre and Liverpool, chemical and alkali manufacturers.

Todd, J. & W., Mile End Road and St. Helen's Terrace, Mile End Road, E., surgeons.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDER.

Hillier, H. J. (trading as the Oil of Sahara Company, and as J. Belleine & Co.), Praed Street and Edgware Road, manufacturer of the Oil of Sahara.

The following amended notice is substituted for that published in the *London Gazette* of September 17, 1889:—

Peters, John, Lewes, journeyman mineral water manufacturer, lately mineral water manufacturer.

FIRST MEETING AND PUBLIC EXAMINATION.

Garlike, Edward William Bennett, Ipswich, surgeon—October 5, Official Receiver's offices, Ipswich; October 10, Shire Hall, Ipswich.

NOTICE OF DIVIDEND.

Laing, Joseph, Stapenhill, Derbysire, drug and general store keeper—first and final div. of 12s. 7d., September 30, Official Receiver's offices, Derby.



A Text-book of Organic Chemistry. By A. Bernthsen, Ph.D., translated by George McGowan, Ph.D. London, 1889: Blackie & Son. 8vo., xviii. + 544 pp. 9s.

THE work before us, on the chemistry of the carbon compounds, has met with considerable favour in Germany, the author, formerly a Professor of Chemistry in the Heidelberg University, and now director of the scientific department in the chief laboratory of the Baden Aniline and Alkali Factory, being one of the most accomplished German chemists. The book, which is intended for students, may be divided into three parts, the first being introductory. In this section there are excellent definitions of the general principles which underlie organic chemistry; for instance, polymerism, isomerism, and homology are succinctly explained, and the student is initiated into the mysteries of constitutional formulæ—always a perplexing thing to beginners. In the second part methane derivatives are treated, and in the third benzene derivatives and the associate pyridine compounds are considered. The first thing which strikes us about this text-book is the eminently lucid manner in which important facts are explained. For instance, in speaking of the halogen derivatives of the paraffins, it is stated that “in all these compounds the halogen is more firmly bound than in inorganic salts, so that when silver nitrate is added to an alcoholic solution of the chlorine compound, *e.g.*, chloroform, it causes no precipitation of AgCl. Nevertheless, the halogen is in most cases easily exchangeable for other elements or groups, a circumstance of the utmost importance for many organic reactions. . . . In all halogen compounds the halogen can be again replaced by backward substitution.” Again: “Caffeine or theine, $C_8H_{10}N_4O_2$, crystallises ($+ H_2O$) in beautiful, long, glancing silky needles of faintly bitter taste, which are sparingly soluble in cold water and alcohol, and can be sublimed. The salts are readily decomposed by water. Chlorine breaks it up into dimethyl-alloxan and mono-methyl-urea.” Such expressive paragraphs as these may not be considered extraordinary, but it would be a difficult matter indeed to put more into the space, or to take away a single word without imperilling the value of the information conveyed. Of equal importance to lucidity, from an educational point of view, is the method of arrangement adopted in text-books. In organic chemistry it is scarcely possible to avoid the method which Nature has sketched for us; and Dr. Bernthsen has certainly, in adopting the inductive treatment, followed the natural groupings to the letter, so that we have under “the methane derivatives” all compounds derivable from the homologous hydrocarbons. It is curious to note that on the last page dealing with that subject we find antipyrine, which we were taught to regard, when it was first introduced, as a synthetical body second cousin to the alkaloids; but the connection is somewhat remote, since it is essentially phenyl-dimethyl-pyrazolene, and is placed at the tail-end of the methane derivatives, until we ascertain more about the relationship of its formula to the closed chain of the benzene series. In regard to the latter, Dr. Bernthsen's book is a reliable guide. On comparing it with a well-known English text-book we find that it is much more interesting, and this advantage does not appear to be acquired at the expense of information, for in that respect the book is quite suitable for reference purposes. In the case of all the most important substances the names of the discoverers and the dates of discovery, occurrence, mode of preparation, characters, &c., are given. Moreover, the author has added numerous references to English, French, and German memoirs which have a bearing upon recent researches, or are of particular historical value—an addition which cannot fail to be of value to senior students. The book, as a whole, is one which well deserves to rank as a recognised text-book of organic chemistry. It does not pretend to take in all the carbon compounds, yet it takes in so many as to require an index of twenty-one double-column pages. It is essentially an intelligent commentary on the principles of organic

chemistry, and makes that department of the science much less forbidding than text-books usually do. The author has complimented the translator in a prefatory note, and this acknowledgment Dr. McGowan well deserves.

Watts' Dictionary of Chemistry. Revised and entirely rewritten by M. M. Pattison Muir, M.A., and H. Forster Morley, M.A., D.Sc. Vol. II. London: Longmans, Green & Co. Large 8vo., xii. + 760 pp. 42s. (leather-bound).

THE appearance of the second volume of this new edition of Watts' “Dictionary” so soon after the first enables us to congratulate the editors on the expeditious manner in which they are preparing it for and passing it through the press. The preparation of the first edition, consisting of five volumes, occupied seven years, whereas we have two volumes, that is, the half of the present edition, published within a year. We do not overlook the fact that the late Mr. Watts had to formulate the style of the book, had to collect facts which are employed in the present edition, and worked single-handed, saving the assistance given to him by specialists; yet, in justice to Dr. Morley and Mr. Muir, it should be noted that a volume of the new edition contains about twice as much matter as one of the old, and a very large proportion of it refers to compounds of recent discovery. Moreover, the style is their own.

It will be remembered that the first volume left off at “Chemical Change”; the second resumes with “Chenocholic acid,” and concludes with a most admirable article on “Indigo,” by Mr. A. G. Green. The special contributors to the volume include one lady, Miss Ida Freund, who writes on “Relative Densities,” and the others are Mr. Henry Baker (Crystallisation), Mr. F. W. Clarke (Elements), Mr. David Howard (Cinchona Bark), Dr. J. J. Hood (Earths), Dr. W. D. Halliburton (Hæmoglobin), Professor F. R. Japp (Glyoxalines, Hydrazines, and Hydrazones), Dr. G. McGowan (Cholesterin), Mr. F. W. Rudler (Geological Chemistry), Professor Ira Remsen (Equivalency and Formulæ), Dr. S. Rideal (Fermentation), Dr. A. Senier (Cyanic Acids), Mr. C. O'Sullivan (Dextrin), Dr. E. Schunck (Chlorophyll), Professor J. J. Thomson (Chemical Equilibrium), Professor R. Threlfall (Dissociation and Explosion), Professor T. E. Thorpe (Combustion and Flame), and Mr. V. H. Veley (Formic Acid). It cannot be doubted that the article on Cinchona Bark, pharmaceutically the most important in the volume, could not have been entrusted to a more competent authority than Mr. David Howard. He has not taken advantage of the opportunity to air any personal opinions which he may hold, but simply and concisely tells us in half a dozen columns the chief facts regarding the history of cinchona, the species and the genus, the organic constituents of the bark, the reactions, quantitative analysis (including separation of the alkaloids), and concludes with some notes on the distribution of the alkaloids in the bark, in which the influence of cultivation and special methods of harvesting the bark are briefly referred to. Mr. Howard divides the barks used in pharmacy and in the manufacture of quinine into six groups—viz. (1) *Yellow* or *Calisaya bark*, (2) *Crown bark*, (3) *Red bark*, (4) *Soft bark* (Columbian and Carthagen bark), (5) *Pitayo bark*, and (6), *Cuprea bark*. He mentions the special characteristics of each. The article as a whole is admirably suited for a dictionary of chemistry, and the analytical methods which are given are sound. To this description, however, one exception must be made, the British Pharmacopœia method of assay as given in the dictionary containing an error which is somewhat astonishing in a work of this character. “The process given in the British Pharmacopœia, f. 111, is also a good one. It is as follows:—Mix 200 grams of the bark, in fine powder, with 60 grams of hydrate of calcium; moisten the powders with half an ounce of water,” &c. It is evident from this quotation that the weights have, in the course of transcription or composing, been transformed from grains into “grams,” so that the process has become valueless. We believe that the abbreviation of the word “grammes” often leads to similar errors, and it would be a good thing if the practice were always discontinued. The special articles in the volume are very important contributions; all touch the high-water mark of modern science, and are likely to influence future specu-

lations or research in their departments. Dr. Schunck's article on Chlorophyll is a charming confession of the chaotic condition into which our knowledge of this "colouring matter" has degenerated. The writer succeeds in extracting the "substance—or mixture of substances" from this condition by telling us what it is not, and in the course of the disquisition we have indications that Dr. Schunck may yet solve the problems which we read between the lines.

The work entailed in the minor articles, and, indeed, in a large number of lengthy articles, has fallen upon the editors. This must have necessitated bibliographic research of an exhausting nature, for the references given in some instances amount to hundreds. In the article on Citric Acid, for example, and its non-etherial salts, which covers about two pages, there are ninety-three references to fuller information on specific points. We cannot help noting weaknesses in regard to matters in which pharmacists are proficient, and it is perhaps not too late to suggest that the editors should consult with one in regard to drugs and medicinal chemicals. We have instances of the necessity for this in numerous short paragraphs, e.g. in regard to copaiba (spoken of as a balsam); eserine (said to be resinous, although it can be crystallised). The Eucalyptus Oil note is weak, so also is the one on Euonymin. We are surprised to read that gamboge is a "gum-resin which appears to be produced from *Stalagmites cambogoides*, a tree growing in Siam." The 1877 Dictionary fell into the same error, but we should not have thought it to be necessary to perpetuate it, when a reference to the British Pharmacopœia would have revealed the truth. We instance these inaccuracies merely to emphasise our suggestion regarding an associate pharmacist, and not with the idea of depreciating the work as a whole. The system of abbreviated writing adopted in the first volume is rigorously carried out in the present one. It is a little difficult at first to "catch on" to this, but frequent reference has convinced us that the editors were wise in introducing the system. It saves much space, and to ensure equal saving of the reader's time they have added to the second volume a Manilla-paper book-mark containing an abbreviated list of the abbreviations. The volume is produced in elegant style. It is printed by the firm who do such ample justice to this journal; and the binding, both for style and durability, is unique in scientific literature.

PHOTOGRAPHIC NOTES.

(Written for THE CHEMIST AND DRUGGIST.)

BOOKS FOR PHOTOGRAPHERS.

Amateur photographers, as a rule, are the most voracious readers of any hobby-riders, and it would be as well to cater for them in this respect, as they may often be induced to purchase some book or magazine. The following is a list of the principal photographic works and periodicals:—

- Abney's "Instruction in Photography," 7th edit.: 1887 (Piper & Carter, 3s. 6d.).
 Abney's "Photography with Emulsions," 3rd edit.: 1887 (Piper & Carter, 3s. 6d.).
 Abney's "Treatise on Photography," 5th edit.: 1888 (Longmans & Green, 3s. 6d.).
 Burton's "Modern Photography," 6th edit.: 1886 (Piper & Carter, 1s.).
 Burton's "Photo-printing and Photo-mechanical Processes": 1888 (Marion & Co., 4s.).
 Chapman Jones's "Science and Practice of Photography" (Iliffe & Son).
 H. P. Robinson's "Pictorial Effect," "Picture Making," and "The Studio" (Piper & Carter, 2s. 6d. each).
 Spiller's "Elementary Treatise on Photographic Chemistry" (Piper & Carter, 1s.).
 Hardwick's "Photographic Chemistry," 9th edit. (J. & A. Churchill, 6s.).
 Sawyer's "A.B.C. Guide to Autotype Process" (Autotype Company, 2s. 6d.).
 Monckhoven's "Photographic Optics" (Hardwicke, 6s.).
 Middleton's "Colotype," translated from the German of Dr. Schnauss (Iliffe, 6s.).
 Emerson's "Naturalistic Photography" (Sampson Low & Marston, 5s.).
 Wilkinson's "Photo-engraving and Photo-lithography" (England Brothers, 6s.).
 Wall's "Dictionary of Photography" (Hazell, Watson & Viney, 2s. 6d.).
 Wormald's "Index of Exposure," 1s.

The weekly serials are:—

- The Amateur Photographer (Hazell, Watson & Viney, 2d.).
 Photography (Iliffe & Sons, 1d.).
 The British Journal of Photography (Greenwood & Co., 2d.).
 The Photographic News (Piper & Carter, 3d.).
 Photographic Review (Bolas, 1d.).

The monthlies are:—

- The Camera (Wyman & Sons, 6d.).
 The Photographic Societies' Reporter (Hazell, Watson & Viney, 4d.).
 The Magic Lantern Review (Taylor, 1d.).

The annuals are:—

- The "Photographic News" Almanac, 1s.
 The "British Journal of Photography" Almanac, 1s.
 The International Annual, 2s.

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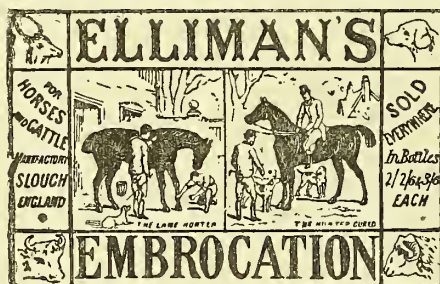
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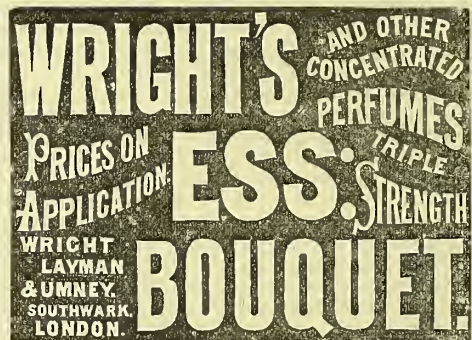
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 Pages 17 and 18.

PROFESSOR MARSHALL
ON PHARMACEUTICAL EDUCATION.

THE large audience which assembled in the Pharmaceutical Society's theatre on Wednesday were not a little disappointed when the announcement was made to them that the eminent professor who had undertaken to inaugurate the new session was prevented by a severe cold from appearing before them in person. The notable strangers, too, whom we generally

look to see on this occasion, appeared to have almost unitedly begun to make excuse. This was the more to be regretted as the presentation of the Hanbury medal, a biennial function, ought to be an occasion of considerable *éclat*.

Professor Marshall has attained to such a high position in the medical world, and his professional reputation is so firmly established, that his speech to pharmacists was anticipated with more than ordinary interest. Truth compels us to add that at least some of those who heard his address, which certainly lost none of its effectiveness in Professor Attfield's admirable rendering of it, were somewhat disappointed. They were confident that the author had not given them his best. He had obviously "cramped" the Calendar and been "coached" by the President, under whose guidance, he said, "I visited this pharmaceutical habitation with its ever-expanding accommodation," and the result was a not very well digested advertisement of the abounding merits of the Society, "its wise and sympathetic Council," its "well-known and often famous professors, lecturers, and students," and its many beneficent works. About all this everybody present knew a great deal more than Professor Marshall; and the worst of it was that the audience could not tell exactly where the compiler of the Calendar stopped and where the President of the Medical Council began.

To prophesy smooth things is perhaps the easiest thing to do in such an address. It may be the proper thing; probably to some it is the pleasant thing; but certainly to the crowd it is not the most interesting way of improving the occasion. Faithful criticism of the practice of pharmacy from the President of the Medical Council would have been refreshing, and perhaps valuable. Even the topics on which he declined to intrude his opinions, but which we gather from the allusion had occurred to him, would have been welcome. As a skilled but disinterested observer, Professor Marshall could have certainly added some suggestive ideas to those we may have already imbibed in reference to "co-operative trade associations and private establishments," and to "the question of the desirability of the State obtaining a source of income from the sale of patented medicines."

It would need a very disputatious critic indeed to disagree with the Professor's advice to students. The only thing to say about it is that it sounds familiar. There is something in the suggestion that the Society should "circulate very widely a brief pamphlet containing advice especially intended for those who are still in the apprenticeship stage"; but if Professor Marshall had been more intimately acquainted with the literature of the trade, he would have admitted that there is no necessity for such a pamphlet until THE CHEMIST AND DRUGGIST goes out of existence. His comments on examinations come from him with weight, of course, but they are not very applicable to the circumstances of pharmacy. Professor Marshall assures us that "prosperity is the invariable reward of lofty aims followed by harmonious and vigorous acts"; but we may assure him in return that if his advice were adopted of employing two examiners to work together at every part of the Pharmaceutical examinations, the one lingering chance of making both ends meet would be withdrawn from the Pharmaceutical Society, notwithstanding all its lofty aims and harmonious and vigorous acts.

THE CINCHONA SYNDICATE.

WE gather from the news brought to us by the last Ceylon mail that the scheme for the formation of a gigantic syndicate of cinchona-growers throughout Asia, which originated a few months ago with a large planter in Southern India, is

still being discussed by interested parties in Ceylon and Java. The Hon. Mr. Mitchell initiated a debate on the subject at the recent half-yearly meeting of the Colombo Chamber of Commerce, under the guise of a question addressed to the secretary concerning the steps that had been taken to ascertain the stock of cinchona at Colombo. This point of the stock of bark at Colombo is a very ticklish one with the Ceylon people, and incidentally it reveals exactly the infinitesimal value of their powers of combination. It is known that the figures of the shipments of bark from Colombo have an appreciable influence on the course of the market, and these figures, which are ascertained by the Customs authorities, cannot be kept a secret. But sometimes it occurs that the shipments, owing to momentary scarcity of tonnage, dearness of freight, or speculative action, do not represent anything like the full extent of the bark which has been brought down to Colombo from the estates, and as the railway carriage returns do not furnish sufficient data to account for the difference it would be very valuable to know exactly how much there is left in the Colombo warehouses. Once or twice the Chamber of Commerce has succeeded in obtaining returns of the stock approaching exactness, but the publication of these returns was not to the liking of the holders of bark, as the figures disclosed a stock far in excess of what was thought to exist, and since then the majority of them have refused to supply information, and any attempt at concerted action has fallen through. The Hon. Mr. Mitchell having set the ball rolling, several of his colleagues in the Chamber added their quota to the discussion. None of them appeared to know exactly how the plan ought to be worked, but all agreed that it would be an excellent thing if an association could be formed to receive all the bark sent to Colombo by the planters, to advance a matter of 60 per cent. of the current value, and "regulate" the shipments to Europe in accordance with the receipts from the up-country and the state of the European market. The discussion failed to reveal the source whence the money for the advance is to come, nor did it go into the matter of a limitation in the harvesting of cinchona, which to outsiders would seem the most suitable end from which to commence the operations of a syndicate, for, as one of the speakers at the Chamber of Commerce meeting observed, "There were many persons who could not afford to do as others did, but who were obliged to harvest their cinchona for the purpose of getting money to cultivate tea. Others, who were not obliged to do so for this purpose, harvested cinchona with a view of getting renewed bark upon trees by shaving." But we have no doubt that the "wise men of the East" will find it possible to surmount this difficulty in a manner which, on paper, will appear quite satisfactory.

The Java Planters' Association has also been approached with a view of securing its co-operation in the scheme. Its secretary has sent a letter in reply, which, but for the well-established reputation of Dutchmen to treat all things in the most solemn manner possible, we should suspect to have been written in anything but sober earnest. He informs his Ceylon colleagues that "The members of the Java Association have met their proposals with a hearty adhesion, and passed a resolution to take in this matter no initiative, but to wait steps which are to be taken by the Ceylon and British India planters. The Java growers feel quite sure that co-operation in this matter will lead to a good end, and restore the position of the market." The secretary of the Java Planters' Association proceeds to invite a deputation of the Ceylon and Indian planters to come over and help to get the Dutch-Indian Government to become a partner in the scheme. The Governor-General of the Dutch

East Indies is to be approached with a view to obtain his consent to an artificial reduction in the output of the bark from the Government plantation. From these Government plantations in Java over 800,000 lbs. of bark were shipped last year, or more than one-fifth of the total crop of the island, and there is a prospect of further extension. The Java planters want to limit the output of the Government plantations to a uniform figure of 600,000 lbs. a year, a wish which they are not very likely to see fulfilled. Moreover, the President of the Java Association is somewhat perturbed as to what is to be done about the South-American cultivators, and wants to know whether these also are to be included in the syndicate. The upshot of it all seems to be, as we have pointed out before, that, while all sections of producers would like to see high prices, they differ hopelessly as regards the first objective to which their aims should be directed. So long as there is so little spirit of cohesion among them, and the conditions under which they can make their cultivation pay are so different, it is pretty safe to assume that the syndicate will not become a very formidable reality.

THE ADULTERATION OF CASSIA OIL.

THE controversy, if a dispute in which all the arguments are on one side can be so called, between Messrs. Schimmel & Co. and Mr. Niedhardt, of Hong Kong, who has set himself up as the apologist for the Chinese adulterators of oil of cassia, now rests at a circular which the Leipzig firm have addressed to the trade this week, and in which they completely dispose of Mr. Niedhardt's assertions that cassia oil may be perfectly pure and yet contain 30 to 40 per cent. of a "resin of oxidation," and that, as soon as it is one season old it becomes at once brown and thick and forms a non-volatile deposit. In their search for parcels of pure cassia oil consequent upon the discovery that nearly all the usual brands of commerce were adulterated, Messrs. Schimmel & Co. found a parcel which had been in the possession of an Amsterdam drug house for nearly eighty years. In advising the execution of their order for this parcel the holder wrote: "The oil you are now about to receive was sold here first at a time when it cost 16-50f. per lb. The present owners of the parcel in point, who have had it for the last twenty-eight years, have heard their fathers speak of it, and there is a legend current as to these fathers having inherited the oil, in their turn, from their ancestors." The seventy cases of which the parcel consisted bore brands which have long disappeared from the market. When the tins were opened they were found to contain a splendid oil of cassia, which left after distillation over an open fire, as well as on rectification by steam, from 6 to 7 per cent. of a fluid residue only, thus establishing that pure oil, even at an exceptionally old age, yields no solid residue. In the face of such proof it is scarcely necessary to go into the circumstantial details with which Messrs. Schimmel & Co. refute the various statements of the proprietor of the Hong Kong "Medical Hall." They give well-deserved prominence to Mr. Niedhardt's assertion that he had found cassia oil to be adulterated with "an essential oil of croton," and to his discovery of the analogy between oil of cassia, fresh thin cod-liver oil, and pale linseed oil in yielding a resin of oxidation.

It is noteworthy that Mr. Niedhardt has, since the publication of Messrs. Schimmel & Co.'s exposure, written to a Hong Kong firm of cassia-oil dealers, offering in future to examine their oils according to "Messrs. Schimmel & Co.'s system," but adding that in that case he would have to in-

crease his fee to \$7.50, because, under that system, he would be compelled to distil the samples in order to test their volatility, a process which had not been required in his previous tests. Of the samples of cassia oil examined by the Leipzig firm, not counting those distilled by themselves from cassia buds and chips and the one Chinese brand of recent import which they had already ascertained to be pure, five were found to be unadulterated: but they all belonged to parcels imported between twenty-two and eighty years ago hunted up in Holland, and the brands of which, viz. Ayong, Hop-Lee, and Tac-Foong, are now practically obsolete. These oils were pale yellow to yellow in colour, their specific gravity at 20° C. varied from 1.026 to 1.062, and they left a *liquid* redistillation residue of from 4.4 to 8 per cent. The notoriously adulterated cassia oils of the brands Yan-Loong, Cheong-Loong, and Luen-Tai were reddish brown to dark brown in colour (those of the latter shade being of a "syrup-like consistency"), their specific gravity at 20° C. ran from 1.051 to 1.061, and they left a *solid* residue on redistillation of from 23 to 38 per cent. The percentage of cinnamic aldehyde in the samples, which is the true test of the value of the oil, varied from 72.9 to 89.4 in the pure oils, and from 47.1 to 63.2 in the adulterated samples.

THE PARIS AWARDS.

WE have several times published the announcement that we have been represented at the Paris Exhibition, and, notwithstanding the peaceful solitude of the retreat which the authorities chose for our case, we have heard with pleasure that a considerable number of British pharmacists, and not a few from other lands, have been good enough to seek us out and leave cards or friendly messages. We are now informed that the glory of "honourable mention" has been thrust upon us by the jury of Class 9, whose duty it was to study the specimens of literature scattered through the Exhibition. This piece of news has neither elated nor disappointed us. Somewhat freely paraphrasing the historical remark made by John Wesley, when he found his wife had left him, we may say that we did not request this compliment, we do not much value it, we do not regret it, we will not reject it. We naturally consider that nothing short of a gold medal could adequately measure our deserts; but we have had too much experience of a cold unappreciative world to be surprised at injustice from a handful of foreigners, not one of whom has, so far as we know, any association with the interests which we represent. Moreover, we have reason to doubt whether we can legitimately appropriate much of the honour of the mention for the literary merits of our journal. We are disposed to credit most of it to the case-maker. Unless some of the jury came stealthily at night and opened our case with a master-key, we do not believe that any one of them had a copy or a volume of our publication in his hand. One day in the summer the Sabbatic stillness of the liberal arts gallery was disturbed by the advent of a crowd of half a dozen jurymen. They lingered for a few minutes in front of the well-selected library of English works exhibited by Galignani—a display which would certainly have stirred enthusiasm in the soul of one of the party if there had been a connoisseur or a lover of literature in the group. Then they ranged themselves in front of our stand; our representative started on a speech which would have been an admirable one if he had been allowed to get to the middle of it, but in less than a hundred seconds he was amiably cut short by the leader of the party saying, "Ah, le Droguiste et Chimiste; je connais ce journal là"; and there the inspection ended.

We ought to apologise for so long a reference to our own affairs; we have quoted the incident to illustrate what we have to say about awards generally. Another may be mentioned. A correspondent writing from Paris at the end of June told us how he watched a conscientious jury testing the exhibits of cod-liver oil in the Norwegian section. Three of the jury had been told off as tasters; the weather was of the hottest; the samples on show had been well exposed to the sun's rays, and had been approaching boiling-point every day for a week. But with supreme indifference to the conditions these gentlemen went through their self-appointed task of tasting a number of rancid specimens which could not possibly have been representative of the bulk.

These two instances are typical of the methods in which juries carry out their duties—sometimes with a mechanical indifference, at others with a self-deceiving faithfulness which may or may not be associated with a sublime ignorance. And this must needs be the case. It is not possible to get impartial experts to judge every exhibit, and if it were there would be more harm done than is done at present. To a great extent the awards do not depend on the exhibits at all. The previous records of a firm, the awards made to it at former exhibitions, its general reputation, are considerations of at least as much importance as the actual collection of products which it may send to any particular exhibition. Nor is this altogether unreasonable. Exhibitions would be even greater nuisances than they are if it were always possible for a new firm by a single lavish expenditure to jump to a higher vantage-ground than that occupied by older, more substantial, and perhaps more reliable rivals. At the same time the system followed is a giving to him that hath, and to the extent that exhibition medals can do so, it is an assistance in holding down younger and poorer firms.

We are disposed to think that the honours have been, on the whole, fairly awarded by the Paris juries. A few instances of national prejudice might, of course, be quoted, but in general care seems to have been taken to distribute the principal awards with discretion and in due proportion. If anything, Great Britain has been exceptionally favoured. While the rate of awards to exhibitors has been 55 per cent. of the gross total, the British section has been complimented by about 90 per cent. of awards to its exhibitors. We do not expect to hear of universal satisfaction, and for the reasons we have given we are inclined to the opinion that exhibitions would themselves be none the worse, and that trade generally would be somewhat healthier, if the system of graduated honours were either modified or abandoned.

DISPENSERS IN NAVAL HOSPITALS.

WE have received from the Director-General, Medical Department, Admiralty, copies of the new regulations for the appointment of dispensers in naval hospitals. There are fourteen of such appointments, four at Haslar, three at Plymouth, and one each at Haulbowline, Chatham, Malta, Cape of Good Hope, Jamaica, Bermuda, and Hong Kong. The rate of pay has been slightly improved, and is now as follows:—

Daily Rate		Daily Rate	
	s. d.		s. d.
On entry	5	After 17 years' service ..	8 6
After 5 years' service ..	5 6	" 20 "	9 0
" 8 "	6 0	" 21 "	9 6
" 11 "	6	" 22 "	10 0
" 14 "	7 6		

exclusive of quarters, and an allowance of 6d. per day in lieu of fuel and lights. Dispensers in charge of stores are granted an additional allowance of 2s. per day at Haslar

and Plymouth hospitals, and 1s. per day at any other hospital at home or abroad. Moreover, dispensers serving at the following stations abroad are paid 2s. per day more at Malta and the Cape of Good Hope, 3s. at Jamaica and Bermuda, and 4s. at Hong Kong. The conditions upon which the appointments are granted are:—(1) Age on entry must not be less than 20 or more than 25 years of age. (2) Candidates must be in good health and of good character, and must possess the Major or Minor certificates of the Pharmaceutical Society of Great Britain. Those possessing only the "Minor" are not permitted to receive the allowance for the charge of stores until they have obtained the "Major" qualifications. (3) Candidates are now required to obtain certificates from the Civil Service Commissioners, in accordance with the terms of the Superannuation Acts of 1859 and 1887, and of the Order in Council dated June 4, 1870, published in the *London Gazette* of June 7, 1870. The Commissioners satisfy themselves as to the age, health, and character of the candidates, their physical fitness, as hitherto, being determined by examination at the Medical Department of the Admiralty, where certificates of fitness are granted for the information of the Civil Service Commissioners, who also accept the certificates of the Pharmaceutical Society in proof of the candidates' knowledge and ability, without further examination.

Dispensers serving at home are granted twenty-eight days' leave of absence annually, and those serving abroad are allowed the same, with liberty to reserve it from year to year, so as to obtain a lengthened period of absence, not exceeding six calendar months. Candidates for the office of dispenser must make a written application to the Director-General of the Medical Department of the Navy, and, as vacancies occur, they are ordered to attend at his office at the Admiralty, Avenue House, 21 Northumberland Avenue, W.C.

MR. F. NEWBERRY, chemist, Exeter, has had an order for his A1 shaving-cream from Prince Albert Victor.

MR. WILLIAM LANGTON, senior partner of the firm Langton, Edden, Hicks & Clark, sailed for Melbourne on Thursday by the s.s. *Carthage* on a business visit to Australia and New Zealand. Mrs. Langton accompanies him.

THE WESTMINSTER COLLEGE OF PHARMACY.—On Thursday, September 3, the students and friends (numbering nearly 150) of the Westminster College of Pharmacy met at dinner in the Venetian saloon of the Holborn Restaurant. The chair was occupied by Dr. Alfred Matcham, supported by Messrs. Wills and Wootton, the principals of the college. The report of the seventeenth session, which was read by Mr. Wootton, indicated continuous progress and success. The results of the last session had been in excess of any previous year. Independently of correspondence classes, 285 students had personally attended the various courses at the college. Of this total number 11 attended practical chemistry and other subjects, not preparatory to any examination; 36 had not completed their studies in July—therefore 238 presented themselves for examination, and of these 190 were successful in passing. These included 21 students who had passed the Major examination, 120 the Minor examination, and 8 the Preliminary examination, and 41 had passed various medical examinations.

The toast of "Success to the Westminster College" was proposed by Mr. H. Nichol, an old student, and responded to by Mr. Wills. That gentleman, who was most heartily received, gave a lively reply. The work of the college, he said, was such as to tell on the physical and mental capacity of much stronger men than himself and his coadjutor, but the evidence of encouraging results soothed their anxiety and stimulated their nerves. Their health should be the students' wealth, their purpose was the students' prosperity, and their devotion would result in the elevation of their students, if only the latter would give hard work on their part.

Mr. Ramsden proposed the "Demonstrators," which was replied to by Mr. Watson Will; the students were toasted by the Rev. W. Williams, and Mr. C. W. Botwood responded. Mr. Reid replied for the visitors, who were complimented by Mr. Walden. The distribution of prizes gained last session wound up the proceedings. Some excellent songs and music were interspersed in the programme.

PARIS EXHIBITION AWARDS.

ON September 29, during a ceaseless, pelting rain, a semblance of distribution took place, with great ceremony, in the Palais de l'Industrie, filled to overflowing on the occasion. After the official speeches M. Berger, the manager, contented himself with reading the list of the grand prizes, and handing to the section presidents the rolls of the different medals and mentions attributed to each division. As, besides 903 grand prizes, 5,153 gold, 9,690 silver, and 9,323 bronze medals, and 8,070 honourable mentions have been conferred, or 33,139 in all, it was practically impossible to read in full the list, which would fill some 430 columns of THE CHEMIST AND DRUGGIST. In the section of educational institutions the Philadelphia and the Boston colleges of pharmacy were each granted a silver medal.

The following are among the awards of the international juries to the exhibitors of the British section. The figures quoted below refer to the classes, viz. :—

9. Printing and books. 10. Stationery, bookbinding, painting, and drawing materials. 14. Medicine and surgery, and veterinary medicine. 27. Apparatus and processes for heating and light. 28. Perfumery; toilet soaps. 30. Thread and fabrics of cotton. 39. Travelling apparatus and camp equipage. 41. Products of mining and metallurgy. 42. Products of the cultivation of forests and of the trades appertaining thereto. 43. Products of hunting, shooting, fishing,

and spontaneous products; machines and instruments connected therewith. 44. Agricultural products not used for food. 45. Chemical and pharmaceutical products. 46. Chemical processes for bleaching, dyeing, printing, and dressings. 49. Agricultural implements and processes used in the cultivation of fields and forests. 51. Apparatus used in chemistry, pharmacy, and tanning. 52. Machines and apparatus in general. 64. Hygiene and sanitation. 65. Apparatus for navigation and life-saving. 67. Cereals, farinaceous products, and products derived from them. 70. Meat and fish. 71. Vegetables and fruit. 72. Condiments and stimulants, sugar, and confectionery. 73. Fermented drinks.

Analysis of Awards.

Section	No. of Exhibitors	No. of Awards					
		Total	G. P.	G.	S.	B.	H. M.
Fine Arts	297	130	7	21	33	54	15
Industrial	673	742	29	184	243	179	107
Social Economy ..	41	38	7	13	13	4	1
Totals	1,017	910	43	218	289	237	123

Abbreviations.—G. P. = Grand Prize; G. = Gold; S. = Silver; B. = Bronze; H. M. = Honourable Mention; H. C. = Hors Concours.

Apollinaris Company (Lim.), 64, H. M.
Aspinall, Aspinall & Co., 45, S.
Atkinson, J. & E., 28, G.
Bishop & Sons, Alfred, 45, S.
Boake, Roberts & Co., 45, B.
Borax Company (Limited), 45, G.
Brand & Co., 70, G.
Bratby & Hinchliffe, 19, B., and 50, S.
Broad's Patent Night Light Company, 45, B.
Brunner, Mond & Co. (Limited), 45, G.
Burroughs, Wellcome & Co., 28, H. M., 45, S., and 51, H. M.
Bush, W. J., & Co., 51, H. M.
Chance Brothers, 45, G. P.
Christy, Thomas, & Co., 44, B., and 45, H. M.
Clarke, W. G., & Sons, 44, H. M.
Clarke, Samuel, 27, B., and 45, B.
Clayton Aniline Company (Limited), 45, G.
Cleaver, F. S., & Sons, 28, S., and 51, S.
Coleman, A., 70, B.
Continental Oxygen Company (Limited), 51, S., and 64, H. M.
Cook, E., & Co., 28, B., 45, G., and 49, S.
Corbett, John, M.P., 72, G.
Crossley Brothers (Limited), 52, G.
Crossley, John, & Sons (Limited), 21, G. P.
Crown Perfumery Company, 28, S.
Currie, William, & Co., 39, S., and 45, S.
Dee Oil Company (Limited), 44, S., and 45, S.

Doulton & Co., 42, B., 64, G., &c.
Eglinton Chemical Company (Limited), 45, G., and 51, H. M.
Facsimile Apparatus Company, 10, B.
Fleet & Co., 70, S.
Fry, J. S., & Sons, 72, G.
Gillott, Joseph, & Sons, 10, G.
Gosnell, John, & Co., 28, S.
Gray, Joseph, & Son, 14, S.
Great Tower Street Tea Company (Limited), 72, S.
Griffiths Bros., 49, B.
Harden Star, Lewis & Sinclair Company, 65, B.
Hardy Patent Pick Company (Limited), 48, G.
Harris, Thomas, & Co. (Limited), 70, G.
Harris, S. & H., 45, B.
Haynes, G., & Co., 27, S., 30, S., and 45, H. M.
Hickison, J., 45, H. M.
Hogg, T. Paul, 45, S.
Hunt, W. F., & Co., 10, H. M.
Jackson, John, & Co., 28, B.
Jeffrey, A., & Co., 45, S.
Jeyes' Sanitary Compounds Company (Limited), 45, H. M.
Johnson, Matthey & Co., 41 and 51, G. P.
Kent, G. B., & Sons, 29, G.
Kepler Extract of Malt Company, 67, S.
Knight & Co., 45, H. M.
Lactina and Restorine Manufacturing Company, 44, H. M.
Lever Brothers, 45, G.

Liebig's Extract of Meat Company (Limited), 70, G.
Macniven & Cameron, 10, S.
Maignen's Filtre Rapide and Anti-Calcaire Company (Lim.), 52, H. M.
Mason, George, & Co. (Limited), 70, S.
Mitchell, William, 10, S.
Morgan Brothers (THE CHEMIST AND DRUGGIST), 9, H. M.
Murray, Sir James, & Son, 45, B.
North British Rubber Company, 45, G., and 39, S.
Nubian Manufacturing Company, 45, S.
Oppenheimer Brothers & Co., 45, S.
Pears, A. & F., 28, G.
Pickering, Joseph, & Sons, 45, S.
Price, Napoleon, & Co., 28, S.
Price's Patent Candle Company, 44, G. P., 45, G. P.
Rein, F. C., & Son, 14, H. M.
Scott, J. & J. G. (Limited), 45, B.
Spratts Patent (Limited), 44, B., 68, G., and 74, H. M.
Standard Malt Extract Company, 45, H. M.
Stevenson, Carlile & Co., 45, G.
Tharvis Sulphur Company, 44, G. P.
Tucker, F., & Co. (Limited), 45, B.
Werner & Pfeiderer, 50, H. C.
Zeno & Co., 28, H. M.
Zuccato & Wolff, 10, B.
Provident Surgical Appliance Society, S.

We add to the above list the names of exhibitors in other countries to whom "grands prix" and gold and silver medals have been awarded in the Chemical and Pharmaceutical and Perfumery Sections.

CLASS 45.—CHEMICAL AND PHARMACEUTICAL PRODUCTS.

Jury.

Scheurer-Kestner, France
Roscoe, Sir Henry, Great Britain
Riche, Alfred, France
Jungfleisch, Emile, France
Bergé, Henri, Belgium
Rousseau, Paul, Brazil
Lastarria, Chili
Newbery, United States

Candiani, Italy
Penafiel, Dr., Mexico
Monrad Krohn, Norway
Thyssen, Dr., Netherlands
Schneider, Dr., Russia
Pector, E., San Salvador
Lunge, Dr., Switzerland
Boude, Frédéric, France
Dehaynin, Félix, France
Frémy, France
Friedel, France
Knieder, France

Kolb, Jules, France
Lequin, France
Levainville, Georges, France
Lorilleux, France
Michaud Fils aîné, France
Roux, Jules, France
Schloesing, France
Schutzenberger, France
Troost, France
Tugot, Jules, France
Dubois, E., Nicaragua
Fougner, Johan, Norway

Oliveira, Domingos d', Portugal
Hogg, W. Douglas, Great Britain
Bonnard, de, France
Hardy, Ernest, France
Suillot, H., France
Vée, Amédée, France

Grands Prix.

Arnavon, France
Billault, France
Genevoix & Cie., France
Compagnie de Saint-Gobin, Chauny & Cirey, France
Hardy-Milori, France
Laire, de, & Cie., France
Lefranc & Cie., France
Ménier, Brazil
Milly, de, France
Nobel, Russia
Pechiney & Cie., France
Poulenc Frères, France
Société pour l'Industrie Chimique, Switzerland
Solvay & Cie., France and Belgium
Tanret, France

Gold Medals.

Administration Pénitentiaire, New Caledonia
Adrian & Cie., France
Arguello hijo, José, San Salvador
Arlot, Ve., & Cie, France
Artus, France
Asselin, France
Bapst & Hamet, France
Béchamp, France
Berguerand, France
Bolloré-Sehnée, France
Boston Rubber Shoe Co., United States
Botelberge & Co., Belgium
Bouffroy, Russia
Brignonnet & Naville, France
Brito, E., Cunha, Portugal
Camus & Cie., France
Chassaing & Cie., France
Chassevant, France
Chesebrough Manufacturing Company, United States
Chesnay & Cie., Nicaragua
Coez & Cie., France
Comité Colonial, Netherlands
Commission Norvégienne, Norway
Compagnie des Colonies, Netherlands
Compagnie Luz Stearica, Brazil
Compagnie de Pachuca, Mexico
Compagnie des Salins, France
Cusinberche, Ve., & Fils, France
Darrasse & Landrin, France
David & Debouche, Belgium
Dècle, Ve., & Cie., France
Deschamps Frères, France and Russia
Desmarais Frères, France
Desnoix, Julien, France
Devoe & Co., United States
Doix, Mulaton & Wolff, France
Dubosc, France
Dubosc, Frères & Subert, France
Durand Fils & Cie., France
Durand, Huguenin & Cie., France
Expert Bezançon & Cie., France
Fabrique Chimique, Netherlands
Fabrique Lombarde de Produits Chimiques, Italy
Faure, France
Figuerro, Aurélia, San Salvador
Fournier & Cie., France
Foy, Norway
Franco & Filhos, Portugal
Gigodot & Laprévote, France
Gilliard-Monnet & Cartier, France
Glaizot, France

Gouvernement de San Salvador, San Salvador
Gouvernement du Paraguay, Paraguay
Gouvernement Néerlandais, Netherlands
Guibal, France
Guimet, France
Guinon, Picard & Jay, France
Huilleries et savonneries meridionales, Italy

Hutelinson & Cie., France.
India Rubber Cie., France
Istrati, Roumania
Jacotin, Binoche & Cie., France
Jacquand & Cie., France
Joudrain & Cie., France
Kaulek, France
Konya Frères, Roumania
Krestovnikoff Frères, Russia
Kuenemann & Cie., Russia
Lambotte, Belgium
Lefebvre & Cie., France
Lepage, Brazil
Leroy, Ve., France
Levasseur, France
Lizariturgui y Rezola, Spain
Manufacture de Gélatine, Switzerland
Margaritti, Greece
Marguerite-Delacharbonny, France
Marques de Hollanda, Brazil
Meissonier, France
Mines de Bouxwiller, France
Ministère de l'Agriculture, Japan
Ministère des Finances, Greece
Moreau & Cie., France
Pease, F. S., United States
Perré & Fils, France
Pommier & Cie., France
Pontier, André, France
Quiroga, Bolivia
Raeymackers & Cie., Belgium
Ragossine, Russia
Revere Rubber Co., United States
Richter, France
Rommel, Mme. Ve., France
Roques, France
Roulet & Cie., France
Salines de Salsomaggiore, Italy
Samora Correa, Portugal
Saraidaris & Athanasiaides, Greece
Schibaef, Russia
Schlagdenhaufen & Heckel, Senegal
Schmidt, Russia
Scott, Argentine Republic
Serpette, Lorois, Langlois & Cie., France
Société Centrale de Produits Chimiques, France
Société de la Dynamite, France
Société des Cirages Français, France and Russia
Société du Sulfure de Carbone, France
Société des Huiles Minérales, France
Société des Quinquinas, France
Société des Téléphones, France
Société d'Haumont, France
Société du Naphte de Bakou, Russia
Société Générale des Téléphones, France
Société Russe du Naphte, Russia
Solvay Process Company, United States
Sordes, Huillard & Cie., France
Stéarinerie de l'Est, France
Stéarinerie Française, France
Taillandier, France
Tancrède, Aimé, France
Thomas, France
Torrilhon & Cie., France
Valentine & Co., United States
Voussakis, Greece

Silver Medals.

Angulo, N., San Salvador
Arnoul, France

Baron, France
Bartholomen & Cie., Brazil
Bertrand, France
Beslier, France
Biard, France
Bocquillon-Limousin, France
Borghes de Castro, Brazil
Borne-Scrimser & Cie., United States
Borrel, France
Bourgeois, France
Bourgeois & Cie., France
Brown & Co., United States
Carof & Cie., France
Carrière Frères, France
Casassa & Cie., France
Catillon, France
Cezeraria Reali, Italy
Césarine, Sœur, Miquelon
Chalmel, France
Chamorro y Javala, Nicaragua
Chatanay, France
Claudon, France
Col, France
Compagnie de Calcination des Os, Russia
Compagnie des Asphaltes, France
Compagnie des Produits Antiseptiques, France
Compagnie de Rio-Tinto, France
Compagnie Parisienne de Couleurs d'Aniline, France
Compagnie Principale du Gaz, Argentine Republic
Cook y Hijos, Venezuela
Costa, Ribeira da, Portugal
Cotton Oil Product Co., United States
Daguin & Cie., France
Dahl & Cie., Norway
Daniel & Cie., France
Deco Urdemanche, France
Deiss de Salon, France
Dela Madriz, Venezuela
Département de Garcia, San Salvador
Derrien, France
Dida, France
Dornemann, France
Dubé-Dausse & Boulanger, France
Duperron, France
Duquesnel & Millot, France
Ecole Ouro Preto, Brazil
Elisseef, Russia
Exposition des Stéariniers de la Région Lyonnaise, France
Fairchild Brothers, United States
François, Grelou & Cie., France
Froger-Bourdon, France
Fumouze, France
Gartenberg, Austria-Hungary
Gavian, Ignacio, Mexico
Giguot-Leroy, France
Gobierno, Mexico
Grandval, France
Hanez y Lamarque, Mexico
Hartog & Cie., France
Hatton, France
Hausmann, Switzerland
Hérubel, France
Himmelbauer, Austria-Hungary
Higuet, Lefèvre & Cie., Belgium
Homolle & Cie., France
Houzeau & Cie., France
Imperial, La, et la Iberia "Garcia," Spain
Isdahl & Cie., Norway
Ivanoff & Savinkoff, Russia
Jijon, Ecuador
Lacour, France
Lancelot & Cie., France
Landolt & Cie., Switzerland
Laso de la Vega, Mexico
Léca & Cie., France

Lécluse Trewoodal, de Frères, France
 Lecouppé, France
 Lefebvre, France
 Legloahéc, France
 Leirinka, Portugal
 Lemoine & Couturier, France
 Lepechkiné, Russia
 Lerenard, France
 Mallevall Père & Routtand, France
 Mante-Legré & Cie., France
 Monclova Hermanos, Porto-Rico
 Morel, France
 Neujan & Delaite, Belgium
 Nikita Ponizovkine, Russia
 Noël, France
 Nogueira, Portugal
 Noirot, Senegal
 Olive, France
 Parquin & Cie., France
 Perez y Parraga, San Salvador
 Pestalozzi, Switzerland
 Petit, France
 Pilon Frères & Buffet, France
 Pluche & Cie., France
 Polakiewicz, Russia
 Porlier, France
 Puyo, Chili
 Raffinerie de Soufre, France
 Rigaud & Chapoteaut, France
 Rigolot & Cie., France
 Ringaud, Meyer & Cie., France
 Robelin, France
 Roguier, France
 Ruch & Fils, France
 Sampaio, Brazil
 Schamphelære, de, Belgium
 Seabury & Johnson, United States
 Serra, Portugal
 Sessa, Cautie & Cie., Italy
 Sevoz & Boasson, France
 Serzin-ky, Austria-Hungary
 Société de Fabrication de Suif Fondu, France
 Société de Produits Chimiques, Belgium
 Société de Vedrin, Belgium
 Société des Glaces et Verres, Belgium
 Soetenaey, France
 Szipapanouski, Austria-Hungary
 Tchiknaverof, Russia
 Tessier, Hnyard & Cie., France
 Theurier, France

Thévenot, France
 Totin, France
 Trinidad Garcia, Mexico
 Tsolakis, Greece
 Upton, United States
 Valdez, Guatemala
 Vassilieff, Russia
 Veneue & Fils, France
 Warner, W. R., & Co., United States
 Weeger, France
 Zavoianini & Cie., Greece

CLASS 28.—PERFUMERY.

Jury.

Guerlain, Aimé, France
 Lecaron, France
 L'Hôte, France
 Coudray, Edmond, France
 Fabriès, Algeria
 Rehns, Aron, Tunis
 Roure, France
 Beleys, Colonies
 Herrick, W., United States
 Chouet, A., France
 Lemerrier, Anatole, France

Grands Prix.

Chris, Antoine, France
 Klotz, Victor, Maison E. Pinaud, France
 Piver, L. T., & Cie., France
 Roger & Gallet, France

Gold Medals.

Boldoot, J. C., Netherlands
 Brocard & Cie., Russia
 Colgate & Co., United States
 Eeckelaers, Louis, Belgium
 Laboratoire Chimique de Saint Pétersbourg, Russia
 Ladd & Coffin, United States
 Lautier Fils, France
 Rallet, A., & Cie., Russia
 Raynaud, France
 Vibert, Léon G. A., France

Silver Medals.

Adamek, Austria-Hungary
 Agnel & Cie., France

Augier, L., & Cie., France
 Benois, Edouard, France
 Bing Fils & Gans, France
 Blanc, Ch., France
 Boucher, C. Emile, France
 Carette, Algeria
 Cottan & Cie. (Société Hygiénique)
 [Vidil & Cie.], France
 Cottance, Bagot & Cie., France
 Darrasse Frères & Landrin, France
 Fay, Ch., & Sainte, P., France
 Lepage, Francisco José, Brazil
 Genovese-Labocetta, Italy
 Hugues Aîné, France
 Jeancard & Gazan, France
 Labarre & Cie., Philippine Isles
 Lacaria, Italy
 La Trappe de Staouëli, Algeria
 Lorenz, George, United States
 Marchandise, France
 Méro & Boyveau, France
 Millot, Ve. Félix, France
 Monin & Pinaud, France
 Mustapha Ben Mansour, Tunis
 Numano Yasutaro, Japan
 Palanca, France
 Pévérelhy, Réunion
 Pinta, France
 Raynaud, Claude, & Cie., France
 Renaud, Germain, Spain
 Ricksecker, Theo., United States
 Ricqlès & Cie., France
 Rimmel, France
 Rizzutto, Italy
 Robertet & Cie., France
 Roman Sala & Cie., Uruguay
 Rosario, A. del, Philippine Isles
 Saint-Germain, Paul, France
 Seguin, Albert, France
 Sergeant, France
 Shipkoff & Cie., Roumania
 Société Anonyme des Parfums Naturels
 de Cannes, France
 Société Industrielle et Artistique de
 Monaco, Monaco
 Souillard, France
 Suez, France
 Thébault, France
 Vachon-Bavoux & Cie., France
 Varaldi, F., France
 Witte & Cie., Spain

Our Paris correspondent writes:—"The usual eruption of ill-feeling broke out among exhibitors as soon as the jurors' decisions became known. Some of the disappointed ones veiled their exhibits; others posted insulting placards—soon removed by authority. Those who got nothing of course complained; those who were recognised thought they were entitled to a higher reward—nothing short of a grand prize was equal to their merit. Perhaps the innocent outsider may think the grand prizemen at least ought to be satisfied.

Not at all. One of these complained his rival got as much, and another (an American) thought he ought to have been given two grand prizes. After a while, however, things settled down somewhat, and many exhibitors—satisfied they could do no better—placed in their showcases cards indicating the distinction conferred, and the 'mention honorable' is by no means looked down upon. In the display of such cards the Americans have been quicker than the English."

MARRIAGE.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

ASHTON—BURGESS.—On September 23, at the Congregational Chapel, Worcester, by the Rev. S. March, B.A., C. S. Ashton, chemist, Buxton, to Emily, second daughter of John Burgess, Worcester.

DEATHS.

SHARPLES.—On September 22, Mr. Charles Heaton Sharples, chemist and druggist, Fishergate, Preston. Aged 40.

WHIMPRAY.—The death took place, at Lancaster, last

week, of Mr. John Lever Whimpray, chemist and druggist. Mr. Whimpray was one of the oldest tradesmen in Lancaster, having commenced business in the town in the year 1835. Twenty-one years ago he took into partnership Mr. Edward Cardwell, who had served his apprenticeship with him, and since that time the business has been carried on under the name of Whimpray & Cardwell. Although Mr. Whimpray practically retired from business three years ago, he has continued to take a lively interest in it, and paid almost daily visits to the shop in Market Street. Such a visit he paid on the day of his death. On his way home that day he staggered and fell, and was picked up in an unconscious state; assistance was speedily procured, and he was conveyed to his residence in Cabel Street, where medical aid was summoned, but he never rallied and died half an hour afterwards. Mr. Whimpray, who had reached the ripe age of 78 years, was a gentleman of very amiable disposition.

THE PARIS EXHIBITION.

(TENTH NOTICE.)

PHARMACEUTICAL AND CHEMICAL PRODUCTS.



HAVING in earlier notices referred at some length to galenical and similar preparations which are exhibited in the French Court devoted to the chemical and pharmaceutical products, it may be said that we have thus disposed of one side of the symbol which begins this sentence. There is still left the chemical side, larger, more composite, and, if possible, more interesting than the former. In proceeding to examine the exhibits comprised in this class we cannot without some system of classification, however crude it may be, obtain that instruction from them which the isolated specimens and admirably arranged groups are calculated to afford. In this notice, therefore, we shall make no attempt to go from case to case *seriatim*, and where certain articles are duplicated it will not be necessary in many instances to refer to the duplicates, except they present some peculiar character. Carbon compounds are so fully represented in Class 45 that we may begin with

ALCOHOLS AND THEIR DERIVATIVES.

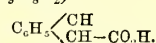
A most interesting collection is contributed by M. EUGENE PORION, of Wardricques, which illustrates the production of alcohol from malt, and its subsequent purification. Incidentally this brings in such chemicals as the alkaline carbonates (used in dehydration), and quite a number of alcoholic bodies separated from the spirit in the course of rectification. An experimental apparatus for fractional distillation occupies the centre; it is delicately constructed, and at first sight appears to be somewhat complicated, but reduced to black and white the essential features appear in our illustration. The tube leading from the flask is filled with porcelain shot, and, it will be seen, is surrounded by a condenser

which may be used or not as appears necessary. There is also provision for two thermometers, one in the flask itself, and the other in the bulb which connects the outlet tube and the condenser tube. By fractionation *Alcohol Brut* (that is dehydrated spirit before final purification) is shown to have the following composition per 1,000 litres:—

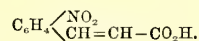
Alcohol (C ₂ H ₅ O)	997.968
Aldehyde (C ₂ H ₄ O)	110 c.c.
Acetone	5 c.c.
Acetic ether	60 c.c.
A body of S.G. .872 and B.P. 73°-76° C.	10 c.c.
Propyl alcohol	345 c.c.
A body of S.G. .809 and B.P. 101°-102° C.	250 c.c.
A body of S.G. .808 and B.P. 109° C.	430 c.c.
Amylic alcohol	582 c.c.
Other products	0.240
	1000.000

All these fractions are shown in quantities proportionate to those obtained in actual working. This exhibit represents one industry, and carries us no further than the production and purification of the alcohol; there is, therefore, a somewhat wide gulf technically between it and the case of products which we now approach, viz. that of PAUL ROSEAU & CIE., 17 Rue Soufflot, Paris. Still the theoretical connection is strong. We are shown here, for example, all the alcohols comprised in the above—ethyl, propyl, hexyl, amyl, and butyl—as the bases of an extremely interesting collection of paraffin derivatives. It is a pretty object lesson in organic chemistry, and serves also as the connecting link with the exhibit which will next be referred to. Hexyl alcohol is a good example of the chemical nuclei from which so many distinct bodies emanate. The alcohol shown here is the normal primary hexyl alcohol (C₆H₁₃OH), but ten other isomeric alcohols exist. Beside it is caproic acid (a hexylic acid, CH₃(CH₂)₄CO₂H), one of the many discovered by Chevreul, and now known to science for sixty-seven years. The alcohol may be made from it. As a link with it and amyl alcohol we have valerianic acid (iso-propylacetic or isobutylacetic acid). Another hexatomic acid (mucic acid, C₄H₄(OH)₄(CO₂H)₂) is also shown. It is a white insoluble powder obtained by the oxidation of gums and milk sugar. Furfural naturally finds a place beside this. It is furfuran aldehyde (C₅H₄O₂), and furfuran (C₅H₄O) is prepared from mucic acid. Furfural is a constituent of the fusel oil of commerce, and is an oily body of agreeable odour. Piperidine also finds a place in this collection, and croton chloral as a derivative of butyl alcohol. A so-called series is shown representing "terebinthin" products, and including thymol and various phenols. Then we have a series of aromatic compounds (Benzene series), including six samples which represent the synthesis of indigo. These are:—

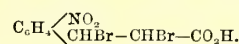
A. Cinnamic acid (C₉H₈O₂):—



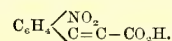
(b.) Para-nitro-cinnamic acid, and (c) ortho-nitro-cinnamic acid (C₉H₇NO₄):—



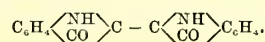
B. Dibromo-ortho-nitro-cinnamic acid (C₉H₇NO₄Br₂):—



C. Ortho-nitro-phenyl-propionic acid (C₉H₇NO₄):—

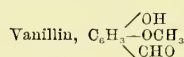
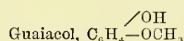
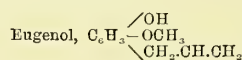


D. Synthetic indigo (2C₈H₅NO):—



In the synthesis a start is made with cinnamic acid, which is converted into the ethyl compound, thus *b* and *c* are formed from this by treatment with nitric and sulphuric acids, and separation is effected with alcohol (which dissolves the ortho compound only). The ortho-ether on saponification with alkali yields *c*, which is now treated with bromine, whereby *B* is produced; again bringing in the influence of an alkali the compound is relieved of its hydrobromic acid, and becomes *C* when the alkaline mixture is acidified, and this, on reduction with glucose, hydrogen, or other suitable body, yields synthetic indigo. It is just seven years ago since Baeyer worked out to completion this beautiful synthetical process; but so far artificial indigo has not become a commercial article—indeed, Paul Rousseau & Cie., whose business

with university and research laboratories enables them to keep a stock of rare chemicals second to none on the Continent, do not include it in their list. In their case are some other rare chemicals—for instance, several fine chloro-metallic salts of pyridine, vanadic acid in crystals about $2\frac{1}{2}$ inches wide, which have a close resemblance to iodine, and some finely crystallised hippuric acid. We have said that this exhibit forms a kind of connecting link with another, and one, we may say, which cannot fail to be of the deepest interest to chemists. As we approach the exhibit of G. DE LAIRE & CIE. (92 Rue St. Charles, Paris), we find the air redolent of a most delicious odour, which proceeds from the artificial vanillin in the case. The exhibit is catalogued as consisting of “organic products, aromatic acids, and aldehydes, aromatic alcohols, phenol ethers, and acetones.” The firm is famous in this department, and their goods are placed in this country through the agency of Burgoyne, Burbidges, Cyriax & Farries. The exhibit takes us right into the heart of one of the most complicated yet fruitful parts of organic chemistry, viz., that dealing with the phenols and aromatic alcohols, &c. There are goodly examples in it of each group, and it would be tedious to trace the connection of all from, say, anisol [$C_6H_5O(CH_3)$], one of the monatomic phenols, the formula showing that it is a phenyl methyl ether. Beside this sample are fine ones of guaiacol and eugenol, both diatomic phenol ethers, the former now being somewhat in vogue as a remedy for phthisis, and the latter also spoken of favourably in dental practice, but they do not find a place here on these grounds, but rather as the starting-points in the manufacture of vanillin, their relationship to which is shown in the following contrast:—



An allied body, anisic acid [$C_6H_4(OCH_3)CO_2H$], with a number of anisates, occupies a place in the exhibit. These four bodies, with their similar nuclei, but distinct chemical constitution, are a good example of the variation in character and properties which slight chemical differences bring about, eugenol being a feeble antiseptic and antipyretic; guaiacol, as the active principle of creosote, one of the oldest antiseptics; anisic acid, an antipyretic of considerable power, and the mother of several highly active bodies in that class, while vanillin cannot be said to be a therapeutic agent at all, but one of the most popular culinary flavours known to man. It is for that reason that we have so good an assortment of interesting organic bodies in this exhibit. G. de Laire & Co. show us what they can do in the production of vanillin; there is a dish of it here in marvellously large needle-crystals as white as snow, but it is as vanillin-sugar, a preparation of high dilution yet of powerful aroma, and suitable for domestic purposes, that it finds popular acceptance. Besides those things which have been mentioned, there is much else in the case which proves the capabilities of the manufacturers. Meanwhile we have passed a few exhibits which deserve examination. For instance, that of P. MOREAU & CIE., St. André-lez-Lille, consisting of chloroform and ethers, shown in handsome bottles with enamelled labels; and in association with the ethers we have the two kinds of tannin—“tannin à l'éther” in beautiful scales, and “tannin à l'alcool” in powder. Then the exhibit by GUSTAVE CLAUDON, of Conflans-Charenton, is one of exceptional interest and value. It resembles the first mentioned in this notice, for it illustrates the manufacture and purification of alcohol, but in this case we have the by-products shown with even greater care. As an example we need only note the series of specimens which reveal the composition of fusel oil—all the bodies are here which Dunstan and his co-workers mentioned last spring in connection with amyl nitrite. Verily, there is nothing new under the sun! Aldehydes are a special feature of this exhibit, metaldehyde in fine prismatic needles being amongst them. We have also a series of butyric derivatives, including several isobutyrate, interesting as recalling the existence of the

acid in arnica root, and pinacone hydrate (tetramethylethylene glycol) in a solid yellowish mass of crystals. The production of wood alcohol is illustrated by KESTNER & CIE., Bellevue, Giromagny, in a series of sixteen bottles, containing methyl alcohol, acetone, acetic acid, and acetate tar, &c. A. M. THEURIER FILS, of Pierre-Bénite, make an attractive exhibit of acetic acid and metallic acetates made from the grape. This firm, we may say, are the successors of J. B. Mollerat, who established the industry at Pouilly-sur-Saône in 1809. Mention should be made here also of a glycerine exhibit by AD. FALCONY, 19 Rue Eugénie, Asnières, who recovers the article from soap-leas, and shows it here in various grades of quality, from the brown article used in the manufacture of explosives to the chemically-pure product known as 30°. Together with these are several specialities such as “Glycocide” and “Glycogumme,” about which we could learn nothing—evidently they are adhesive agents. Widely different in appearance from the before-mentioned substances are those which may be grouped under the head of

FATTY BODIES.

There is an interesting collection of seed oils in another court, but to these we do not propose to refer at present. The unsaponifiable fats first claim attention. They include the heavy paraffins and cholesterin bodies. The latter, obtained in the wool-washing industry, are exhibited by HOLDEN & FILS, of Croix, an English firm who have established themselves in France and hold a strong position there as large employers of labour. Mr. Isaac Holden, M.P., one of the most interesting personalities of the present Parliament, is the head of the firm. In conversation some time ago with a CHEMIST AND DRUGGIST representative, Mr. Holden gave us many interesting particulars regarding the industry which he has so successfully directed. Mr. Holden is a millionaire, and to us the most interesting of his statements were those regarding the gigantic quantities of “wool fat” which his works annually turn out. Some thousands of tons are recovered from the wash-water, together with a considerable quantity of potash base. There are about a dozen specimens of the “fat,” suint making the start, and providing several distinct substances, such as suint olein, a brown wax, oil for jute batching, three distinct oils for dressing chamois leather, purified suint of a very creditable colour, although it does not appear to have been prepared for medicinal purposes; in fact, the whole of the “fat” which the firm manufactures finds its way into the hands of those who use it for lubricating and batching; a small quantity goes for soap-making, and it is possible that the wax may be used for candle-making. We next come to the paraffin exhibits, of which there is a large number to illustrate the petroleum industry. One of the finest exhibits in this class is that of LANCELOT & CIE., who adopt a rather striking method of showing their “vaselines.” In a tall cylindrical jar, with a globular base, they have put the articles, filling the globe with white, then a layer of brown above it, a layer of yellow, and so on until the top is reached, the whole having the appearance of the variegated show-bottle which we recently described. The so-called vaseline is the principal article which the firm show; they have it yellow and white, for medicinal purposes. The former is not exactly like true vaseline: it wants transparency and homogeneity, but otherwise appears to be suitable for pharmaceutical use; and in proof thereof the exhibitors show pomades and cosmetics made from it, as well as such ointments as mercurial. There is also an excellent sample of water-white vaseline oil used for extracting the perfumes of flowers. An exhibit which vies with that is made by EUGENE BOULEROY & CIE., 29 Rue de Neuilly, Clichy; but this one consists mainly of illuminating oils, of which they turn out 8,000,000 kilos. annually. DESMARAIS FRÈRES, 29 Rue de Londres, Paris, have a nice exhibit, which illustrates completely the purification of petroleum, and includes, besides “vaselines,” good samples of paraffin, illuminating oils, and benzene, such by-products as sulphate of iron and coke. There are other similar exhibits in the section, but the only one that need be referred to is that of LOUIS M. ROUSSEAU, of Ermont, which shows the application of hard paraffin in the manufacture of impermeable paper. This is made of various colours, and M. Rousseau proves that it is unacted upon by alcohol and water by suspending parcels of the paper in jars of these liquids.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., October 3.

THE week under review has been a satisfactory one as regards business in our branches. The drug auction to-day were exceedingly long, owing to the inclusion of about 1,000 packages senna delayed in landing through the recent strike. There was a very good attendance at the auctions, and they did not come to an end until near 5 P.M., a very great proportion of the goods offered being sold. The following are the principal changes for the week:—Drugs, higher: Cape aloes, Curaçao aloes, fine cardamoms, Calabar beans, Kola nuts, ipecacuanha, HGH peppermint oil, Honduras sarsaparilla, and senna. Very steady: Senega, beeswax, honey, castor oil, chamomiles and high-dried rhubarb. Lower: Asafœtida, dragon's blood, gamboge, guaiacum, myrrh, and gum benjamin. In chemicals and metals camphor and quinine are higher and quicksilver cheaper. Among dysaltries, &c., advances have occurred in shellac, cocoa butter, Guinea grains, and sulphate of copper, but benzol, sulphate of ammonia, and gambier, on the spot, are weaker.

LABOUR AGITATION ON THE CONTINENT.—The stevedores in Rotterdam struck work a few days ago, in imitation of their London colleagues, for an advance of 1*d.* an hour on their wages of 4*d.* per hour. They obtained the increase with very little trouble. In Saxony the mill-workers wish their working-day reduced from twelve to eleven hours, and a vote was taken among the masters on the question, but although the largest factories were willing to accede to the demand, the smaller ones declined to adopt the plan, and the scheme fell through.

TRADE WITH THE UNITED STATES.—In consequence of complaints which have been laid before them, the council of the London Chamber of Commerce are desirous of considering what steps can be taken to secure an alteration of the United States Consular Regulations, in so far as they relate to the personal attendance of principals at the consular offices, and the hours during which the consulates are open for business purposes. At the same time they also wish to consider any objections that may be felt to the existing consular fees. Firms interested in trade with the United States are requested to furnish the secretary with any particulars likely to strengthen the hands of the council.

THE NEW DRUG WAREHOUSE OF THE LONDON AND EAST INDIA DOCKS.—The show of drugs, musk, &c., at the Fenchurch Street warehouses on Wednesday was the last which, in all probability, will ever be held in those buildings, which have been sold, we understand, for the purpose of erecting blocks of offices and private warehouses. The stock of drugs, gums, musk, essential oils, &c., now stored at Fenchurch Street is being transferred with all possible dispatch to the companies' warehouses in Crutched Friars, hitherto used as a bonded tea warehouse, and there the "shows" will be held in future.

THE first sitting of the Board of Trade for the hearing of objections to the new railway rates will be held at 8 Richmond Terrace, Whitehall, S.W., on Tuesday, October 15, at 11 A.M., and the first point for discussion will be the second clause in the general conditions, on page 19 of the revised schedule of maximum rates and charges of the London and North-Western Railway, which relates to station and service terminals. The Board of Trade will take for the purpose of discussion of

the classification of merchandise traffic and the general conditions applicable thereto, the schedule of the London and North-Western Railway Company, and objectors who have lodged objections to the schedules of any other railway company will be allowed to appear and support those objections so far as they are applicable, as if they had objected to the schedule of the London and North-Western Railway.

ACIDS.—Carbolic slow of sale with rather larger stocks of all kinds than is usual at the present time of the year. Crystals, pure 40° C. are quoted at 1*s.* 1½*d.* per lb., in bulk, which is lower, or at 1*s.* 5½*d.* in bottles. Citric quiet but steady at 1*s.* 3½*d.*, perhaps 1*s.* 3¼*d.*, per lb. The imports of lemon-juice from Sicily into London and Liverpool for the periods between January and September have been as follows:—

	1883	1884	1885	1886	1887	1888	1889
Pipes	3,124	,509	2,934	1,305	,205	3,511	4,052

Tartaric dull and neglected at 1*s.* 2*d.* to 1*s.* 2½*d.* per lb., according to brand.

ACONITE.—Thirty-four bags Japanese very small to medium size are priced at 37*s.* per cwt.

ALBUMEN.—We hear that for egg albumen higher prices have recently been obtained, and for good flakes 2*s.* 7*d.* per lb. is now required.

ALOES.—Cape are decidedly dearer, and it seems now quite certain, as we have pointed out for some time, that this season's crop will be abnormally small. The Cape steamer which arrived yesterday has not brought any aloes. Prices advanced about 1*s.* 6*d.* to 2*s.* to-day, when 23 out of 33 cases offered sold at 27*s.* 6*d.* per cwt. for fair bright hard seconds, slightly overheated; 25*s.* 6*d.* to 26*s.* 6*d.* for rather drossy; and 21*s.* down to 18*s.* for dull and soft. Curaçao aloes are in large supply, the catalogues consisting of 549 boxes and 570 small gourds, the latter weighing about 1 ton. The boxes brought an advance of about 2*s.* 6*d.* For good red liver 65*s.* was suggested; fair to fine bright Capey sold at 23*s.* 6*d.* to 27*s.* 6*d.*; and dark brown gourds at 11*s.* to 24*s.* per cwt. Zanzibars neglected for ordinary, but fine are very scarce. A few lots sour red aloes sold cheaply to-day: hard, 52*s.*; low and soft, 40*s.* and 47*s.* per cwt.

AMBERGRIS.—Still held at extravagant prices; 4½ oz. of good grey colour, but rather weak flavour, are held at 140*s.*, and 20 oz. dark undeveloped were bought in at 50*s.* per oz.

AMMONIA SALTS.—Carbonate dull at 3½*d.* to 3¾*d.* per lb. Salammoneiac 36*s.* for first, and 34*s.* for second crystals. Sulphate lower, Beckton, 11*l.* 17*s.* 6*d.*; London, 24-per-cent. grey, 12*l.*; Leith, 11*l.* 17*s.* 6*d.*

ANISE.—For six cases Star-anise of doubtful quality and weak flavour, *via* New York, 72*s.* 6*d.* per cwt. was suggested. Nine cases Japanese star-anise are held at 35*s.* per cwt. Fair old crop Russian is worth about 19*s.* per cwt., but new seed is held above market value.

ANNATTO.—None offered at auction to-day. In Liverpool Guadalupe annatto is obtainable very cheaply, at 2½*d.* to 2¾*d.* per lb. Cayenne, 1*s.* to 1*s.* 2*d.* per lb.

ARARоба.—The recently-landed is gradually being sold off privately, so we hear, on the price-basis named in our last.

ARSENIC firm at 13*s.* 3*d.* to 13*s.* 6*d.* per cwt. for best white powder.

ASPHALTUM.—Of 45 cases fine bright new Syrian asphaltum in lump, 30 sold at 35*s.* per cwt.

BALSAMS.—Canada steady at 1*s.* 6*d.* per lb. Copaiba.—At to-day's auctions several lots were shown, but the demand has almost ceased, and all were bought in at more or less nominal rates. Thin pale-yellow Pará, which is said to be scarce, is held at 2*s.* 2*d.* per lb.; rather cloudy brownish to good thick Maranhão, 2*s.* 1*d.* to 2*s.* 2*d.* per lb. Angostura and Maracaibo balsams are neglected. Peruvian balsam remains very dull at 4*s.* per lb. nominally, but Tolu is reported in better demand privately.

BENZOL.—The demand has been rather slower, and prices are a little easier here; 90 per cent., 3*s.* 1*d.*; and 50 per cent., 2*s.* 2*d.*

BLEACHING-POWDER dull at 7l. 15s. here, and 20s. less than on the Tyne.

BUCHU.—Some very cheap parcels were knocked down to-day at 2d. to 2½d. for good bright green leaves (round), and 1½d. per lb. for dark mixed ditto.

CALABAR BEANS.—In Liverpool sales have been made at 7½d. per lb., and 7½d. per lb. is now asked; but at to-day's drug auctions 2 bags were placed (subject to approval) at 7d. per lb.

CALUMBA.—Good bright hard washed root is held for 35s. per cwt. Of 320 packages shown to-day part sold, mixed sizes, part grey, part good yellow, wormy, at 20s. per cwt. Fair sound sorts, mixed colour, are held at 18s., smaller and darker at 12s. to 13s. per cwt.

CAMPOR (CRUDE).—On the spot nothing appears to be available now below 110s. per cwt. for Japan, while for forward delivery (month not named) 105s. c.i.f. is quoted.

CAMPOR (REFINED).—On Friday last the English makers advanced their quotations ½d. per lb. They now ask 1s. 4½d. to 1s. 4d. for bells, according to quality. The foreign agents are also correspondingly firmer.

CANTHARIDES firm. For a lot of 6 cases good bright but somewhat small *Russian* 3s. 9d. per lb. was refused, and 4s. 2d. per lb. is named as the limit. Ten cases *China* are held at 1s. per lb., an offer of 11d. not being accepted.

CARAWAY SEED weak at 17s. to 18s. for *Russian*, and 20s. to 21s. for new *Dutch* seed.

CARDAMOMS.—About 135 packages were offered to-day, which is rather less than the average, and with fair competition prices generally ranged high for the 53 cases sold, occasionally 2d. dearer for good qualities. *Ceylon Mysore*, soft round pale, medium to bold, 3s. 2d. to 3s. 4d.; small ditto, 2s. 3d.; ditto, medium to bold, but brown, 2s. 4d.; small ditto, 1s. 7d.; small to medium brown mixed split, 1s. 3d.; good plump wild *Ceylon*, 1s. 6d. per lb.; *Seed*, 1s. 6d. per lb.

CASCARA SAGRADA.—Prices are unchanged this week, viz. at 8d. per lb. for good bark on the spot, and 70s. f.o.b. New York forward. Three bales shown at auction to-day are held at the former price.

CASCARILLA.—Of 51 packages, 29 were sold. Bold silvery but woody mixed, 30s.; thin to fair brown, 24s.; small damaged, 18s. per cwt.

CHAMOMILES.—There is a decidedly better feeling for Belgian flowers, and though prices have not yet improved very much (37s. 6d. to 40s. per cwt., according to quality), we are not likely to see lower rates.

CINCHONA.—The usual assortment of South American bark was offered to-day. *Huanoco* sold dear, long silvery to brown quill, 1s. to 8d.; *Loza*, 1s. 9d.; *Guayaquil-Loza*, fine dark quill, 1s. 4d.; ordinary down to 2½d. per lb. *Porto Cabello*, good bright orange but mostly damaged, was bought in at 1s. per lb., but there were no bids. *Calisaya*, spurious thick flat sold at 9d. per lb.; genuine but very bad colour, 7d. refused; fair to good bold bright flat held at 1s. 6d. to 1s. 8d. per lb. Rnsty brown to good grey silvery *Guayaquil* quills sold at 5d. to 1s. 5d. per lb. Our imports from all quarters this week have been 1,127 packages. The exports of cinchona from Ceylon during the periods between October 1 and September 14 have been:—1888-89, 10,209,481 lbs.; 1887-88, 11,090,806 lbs.; 1886-87, 13,548,098 lbs.; 1887-86, 14,701,578 lbs. The shipments from Java were very large in the month of July, the figures showing a total of 305,397 lbs., against 174,001 lbs. in July, 1888.

CIVET.—Four horns of fair ordinary quality were sold cheaply to-day at 8s. per oz.

COCOA BUTTER.—The improved demand to which we referred last week has made further progress, and at the monthly auctions on Tuesday 300 2-cwt. cases of *Cadbury's* brand were disposed of at a fresh rise of about 2d. per lb., rising from 1s. 2½d. to 1s. 4½d., the average price being 1s. 3½d. per lb.

COCA LEAVES.—Fifteen bales fair brown mixed *Huanoco* leaves, nearly all worm-eaten, sold pretty well at 11d. per lb. From *Java* there were 18 boxes, about 270 lbs., which sold

at 10d. per lb. for green crushed, and 8d. per lb. for dark mixed leaves.

COLOCYNTH.—Nothing was offered to-day, and good quality is reported difficult to find.

COPPER (SULPHATE) is dearer on the spot at 22l., while for November-December the same price is quoted.

COWHAGE.—Nine tins were offered to-day, a few of good quality, but most of it very stony. The price is 8d. to 9d. per oz.

CREAM OF TARTAR neglected and without buyers, though offered freely at 90s. per cwt. for first French crystals.

CROTON SEED is doing rather better. At auction to-day 20s. per cwt. was refused for fair ordinary mixed Bombay seed.

CUBEBS, steady. At to-day's auctions two parcels were shown, but not sold; fair quality, partly shrivelled and stalky, held at 24l., more dusty at 22l. 10s. per cwt. Our imports have been 55 bags since last week.

CUMIN SEED.—*Malta* remains very low in price. Eight bales of dark and weak seed sold at 21s. 6d.; for good quality 27s. per cwt. is required.

CUTCH.—At auction on Tuesday over 1,000 packages were disposed of "with all faults," at from 5s. up to 17s. 6d. per cwt. for sea-damaged lots. In Liverpool the better qualities command full prices as a good part of the large stock is thought to consist of inferior cutch. Y three stars in tablets, 29s.; double elephant, 28s. 9d. to 29s.; double eagle, 28s. 9d.; Maltese cross, 26s. 6d. per cwt.

DRAGON'S BLOOD.—Sales were made at a decline of about 15s. per cwt. to-day. Of 18 packages offered at auction 8 sold at 5l. 12s. 6d. for bold seedy saucers of good fiery colour, while the same price was paid for a lot of heavy brick saucers not by any means as good. Long finger in reed of fair colour was bought in at 6l. 10s. per cwt., and owners refused 80s. per cwt. for good *Socotrine* drop.

ERGOT OF RYE.—For good sound old *Spanish* 1s. 6d. per lb. is wanted, and the owners refused an offer of 1s. 7d. per lb. for a parcel of bold ergot, said to be of the new crop, but wormy.

FENUGREEK SEED is quiet, and tending rather easier, as heavy supplies are said to be held back in Africa.

GALBANUM.—Genuine quality has not been offered for a long time, and would bring high rates if available.

GALLS.—In *China* galls, some plum-shaped distant shipment have been sold at 58s. 6d. "c.i.f." terms. About 900 bags *Turkey* galls were offered at auction to-day, probably for the purpose of advertisement only, for as usual only a few lots of damaged were sold. Blues, mixed size, are held at 55s. (54s. refused); greens at 50s.; and whites at 45s. per cwt.

GAMBIER.—Spot and landing is rather easier for the week, though closing firmer again, at 30s. to 30s. 3d. per cwt. Forward delivery, however, is more firmly held at 29s. for August-September, and 28s. 6d. for September-October.

GAMBOGE.—About 20 packages were offered to-day, and mostly disposed of at a general, though slight, decline. One lot, however, sold very cheaply. For good partly run pipe, good bright fracture, 10l. 12s. 6d. was refused; ditto slightly damp sold at 10l. 7s. 6d. to 10l. 10s.; fair coloury run pipe, 10l. to 9l. 17s. 6d.; bold loose old pipe, ricey fracture, 9l. 12s. 6d. per cwt.

GLYCERINE steady, but without change.

GUINEA GRAINS.—There have been no fresh arrivals in Liverpool recently, and although a good inquiry prevails, sales are limited in the absence of stock. Prices are nominal.

GUM AMMONIACUM has been very scarce recently in good quality. At to-day's auctions 6 cases good clean seedy grain of no flavour were bought in at 20s. nominally, an offer of 6s. 6d. being refused.

GUM ARABIC.—The selection offered to-day was a small one. *Australian* gum, fine frosted drop brought 51s.; fair to good glassy, 36s. to 47s.; block, 24s. per cwt. *Aden*, small to medium pale ambery sorts bought in at 80s.; fine soft pale *Cape* siftings sold at 72s. 6d. per cwt. At Liverpool

very rough Galam Senegal has sold at 80s. There has been a good inquiry there for Brazilian gum at the recent reduction, but holders are again much firmer now and require 28s. to 28s. 6d. for common, and up to 50s. for the best. *Ghezirah* quoted at 70s. Gedda, and Talca at 60s. per cwt.

GUM ASAFOETIDA.—A parcel of 314 cases, imported about six months ago, and which had been offered before for the most part, was placed on sale to-day, when 88 cases sold at the lower rates all round; fine pinky block, 29s. 6d.; fair ditto, 28s. to 28s. 6d.; greyish ditto, 27s. to 27s. 6d.; pinky and greyish mixed, 27s., declining to 26s.; stony mixed, 23s. 6d. refused; ordinary sold at 20s. to 22s. per cwt. The decline averages 2s. 6d. to 3s. per cwt.

GUM BENJAMIN.—Of *Siam*, 25 cases were shown, and bought in at the auctions, there being no demand, though one parcel was subsequently reported sold privately. Common and woody blocky siftings held at 97s. 6d.; small grain, partly blocky, grey colour, bought in at 7l. per cwt. Of 112 cases *Palembang*, 75 were sold: fair almondy, 55s. to 57s. 6d.; ordinary, 39s. to 48s. per cwt. Of 64 cases *Sumatra* gum, only 18 sold at somewhat easier prices with difficulty: 8l. for fine pale almondy centres, good flavour, slightly brown corners; 7l. 12s. 6d. for old fractured good almondy centres, false-packed sides; 7l. 7s. 6d. for fair almondy centred seconds, red sides.

GUM GUAIAECUM sold at lower prices to-day, 14 boxes bringing 1s. 2d. to 1s. 4d. per lb. for good bright resinous block, 1s. to 1s. 1d. for fair blocky drop, and 9½d. to 11½d. for dull mixed.

GUM MYRRH in very large supply and neglected. To sell, lower prices would have to be accepted; and for one parcel of low dark Aden sorts, mixed with bdellium, only 49s. to 51s. was obtainable. Fair coarse siftings sold at 72s. 6d.; small ditto, 52s. 6d.; pickings, 40s. per cwt.

GUM THUS.—Good qualities are said to be wanted at about 19s. per cwt. At auction to-day a parcel of rather soft resin was bought in at 18s. per cwt.

GUM TRAGACANTH.—Fine pale held at 11l. per cwt.

HONEY.—In Liverpool the demand remains rather slow, with sales of *Chilian* at 37s. to 39s. for good fair, down to 28s. for common, and *Californian* at 37s. 6d. to 45s. per cwt. At auction to-day 7 kegs fair candied brownish *Chilian* brought 42s. 6d., and brown *Jamaica* 31s. per cwt.

INDIGO.—The quantity originally declared for the sale commencing on October 14 was 6,370 chests, but recent arrivals of Kurpah indigo have increased the declarations to 7,220 chests. It is estimated that about 5,000 chests are Kurpah, while the quantity of Bengal to be offered will not exceed 1,300 chests, being the smallest amount ever declared for an October sale. About 700 chests dry leaf will be included in the auction. Calcutta reports dated September 7 state that the season's manufacture in Bengal was practically finished. From Behar the reports come rather disappointing, and a small output may result. From the North-West the reports are uncertain, but too much rain has fallen at Benares.

IODINE.—Unchanged at 9d. for crude, 13s. 3d. for resublimed, and 11s. 3d. to 11s. 6d. per lb. for iodide of potassium.

IPECACUANHA.—To-day 56 serons were offered, of which 22 sold, all told. The holders were very firm indeed, and full prices to 1d. or 2d. advance had to be conceded. Very good stout is held at 6s. 7d. per lb.; fair, partly thin sold at 6s. 2d. to 6s. 4d.; thin to good stout, slightly damaged, at 6s. to 6s. 5d. per lb. We understand that the Paris wholesale houses have a pretty good stock in hand, and that about 40 serons were recently imported on that market direct.

IRISH MOSS.—The market is over-supplied with common qualities and prices range from 9s. 9d. to 15s. per cwt.

JABORANDI leaves are selling in a small way at 6d. per lb. for fair quality.

JALAP.—At auction to-day 20 bales very small and wormy tubers, mostly damaged, were bought in at 7d. per lb.

KOLA NUTS.—208 lbs. very good dry West Indian sold at the full price of 11d. per lb.

KOUSSI.—Roll is not offered at present. For 2 bales dust, much mixed with wood, 5½d. was refused, the limit being 6d. per lb.

LIME-JUICE.—Eleven puncheons low Montserrat, common and full of sediment, sold without reserve at 7d. to 8d. per gallon to-day.

LIQUORICE.—Of 8 3-cwt. bales good bold bright decorticated Runcan root, 6 sold at 45s. per cwt.; 12 bales fair sliced but rather dark were bought in at 35s. In Liverpool Smyrna paste is worth 30s. to 35s. per cwt.

LYCOPodium.—Prices may be expected to go lower before long, the crop having been a very good one in Russia.

MERCURIALS remain unchanged at 3s. 7d. for *Calomel*, 2s. 11d. for *Corrosive sublimate*, 2s. 1d. for *Mercurial ointment*, 3s. 9d. for *Red*, and 3s. 8d. for *White precipitate*, 2s. 1d. for *Blue pill*, and 2s. 9d. to 3s. for *Vermilion*, but a change in the official price of quicksilver may not unlikely reduce these quotations shortly.

MORPHIA remains firm at 4s. 9d. per oz.

MUSK.—At to-day's auctions there were no buyers for this article, and practically the whole of the supply was bought in. First pile small to bold, thin blue skin and underskin, dry, well trimmed, at 90s.; for 2 caddies rather damp 87s. 6d. is asked; for another, thin brown skin and underskin, and very damp, 84s. was refused. Two caddies third pile, part spurious, but thin blue skin, sold at 68s. per oz. Common *Cabardine* rubbish brought 5s. per oz. *Grain musk* was not sold.

OIL (CASTOR).—Ninety-nine cases first Calcutta oil, fair pale, were offered to-day at auction, and sold very quickly at 4½d. per lb. In Liverpool the market also remains firm, Calcutta seconds and first-pressure French selling freely at 4d. per lb.

OIL (COD-LIVER) is receiving enhanced attention.

OIL (OLIVE).—The reports from France and Italy are very unfavourable. The markets here and in Liverpool are steady. *Spanish* and *Messina*, 35s. 6d. to 36s.; *Mogadore*, 34s. to 34s. 6d.; eating-oil, 4s. 3d. to 6s. per gallon, according to quality.

OILS.—Mitcham distilling for this season is now finished, the amount of crop being, on the whole, smaller than usual. The low price of the oil in some cases, and small demand in others, had the effect last season of stopping production to a considerable extent. As an indication of the much smaller bulk of crop to be treated this year, we may mention that the distilling operation in 1888 lasted about three weeks longer than it has done this year, and only finished about the middle of October. The area of mint planted alone this year was considerably smaller than last, and the same remark applies to lavender. It is estimated that the amount of peppermint oil this season is short by nearly one-fourth compared with last season, the relative yields of the stills (1,000 gallons each) being for 1888 6 to 7 lbs., and this year 7 to 8 lbs. per still outside. There is little doubt that if no improvement takes place upon present prices the production next season will be lessened to a very considerable extent, as the loss to growers at present rates is a very serious item, and one which will compel them to turn their attention to more remunerative channels. The only satisfactory crop this year, as it was last, is chamomile, which has all, or very nearly all, been bought up; but this, at its best, is only a small item. Present prices:—Peppermint, 19s. to 19s. 6d.; lavender, 45s. to 50s.; chamomile, 55s. to 60s.; and pennyroyal, 32s. 6d. to 35s. per lb.

OILS (ESSENTIAL).—*Star-anise*: An offer of 6s. per lb. for a lot of unworked star-anise in sale to-day was refused, 6s. 1d. being the price. *Bergamot* very firm at 9s. f.o.b., and fine *Lemon* 4s. 6d. f.o.b. *Dill* and *Caraway* oils will probably advance. American peppermint oil has been in further improved request this week, and we understand that 11s. 6d. per lb. has been paid this week for the H.G.H. brand.

OPIUM.—The London market has ruled firm but quiet this week, and prices remain about at the same level as last week, with the exception that for *Soft shipping* opium, in which no business was done last week, 14s. 6d. per lb. has since been

paid. For *Karahissar* 11s. is still the last price paid, and 10s. 6d. for good seconds.

QUICKSILVER.—The importers still ask 9l. 15s. nominally, but second-hand holders have eased off, and are now sellers at 9l.

QUININE.—The market has been firmer this week, and closes quiet but steady. Business has been done at 1s. 1½d. for cash on the spot, and 1s. 2d., usual terms, for German bulk, and 1s. 1d. for Milan brand. January delivery has sold at 1s. 2½d., and February at 1s. 2½d. per oz. At auction 300 oz. Brunswick, in 100-oz. tins, were apparently sold at 1s. 1½d. per oz.

RHUBARB.—The auctions to-day comprised the large quantity of 159 cases, of which 127 sold with very fair competition at irregular prices, *Shensi* root being mostly cheaper, but high-dried selling at very stiff rates, if not dearer. The following prices were realised:—*Shensi*: Druggists' root, small round ¾ grey pinky, ¼ brown fracture, 2s. 1d. refused; fine small to bold flat good clean, orange coat, ¾ red pinky fracture, 1s. 10d. refused. Round medium to very bold orange coat, ¾ grey pinky, ¼ brown fracture, 1s. 11d.; sold; good medium root, round, rough coat, ¾ good pinky fracture, 1s. 7d.; better appearance, but flat, 1s. 10d.; very bold good yellow coat, ¾ good pinky, ¼ dark fracture, 1s. 10d.; small to medium round heavy root, dull coat, ¾ grey, ¼ brown fracture, 1s. 7d.; bolder, but worse fracture, 1s. 6d.; small to bold wormy, good fair, pinky fracture, 1s. 3d.; ditto round and flat mixed, 1s. 2d.; flat small to medium, ¾ pinky, ¼ dark, slightly wormy, 1s.; very wormy, but good fracture, round, 10d. to 11d. per lb. *High-dried*, small to bold, fair even pinky fracture, 1s. to 1s. 1d.; medium to bold, pale coat, ¾ pinky, ¼ dark, good appearance, 1s. 3d.; small and rather dull fracture, 10½d. to 11d.; very wormy, but partly very bold, good fracture, 8d. to 8½d.; smaller and colourless, 7d. to 7½d. per lb.

SARSAPARILLA, rather firmer for *Honduras*, of which four serons "J. L. Truxillo" are held at 1s. 5d. per lb., while 6 "Crown FG" sold at 1s. 2d. per lb. *Jamaica* grey damaged sold at 1s. 6d. per lb., *Native* red at 11d. to 10d. and *Lima Jamaica*, also damaged, at 10d. to 11½d. per lb.

SENEGA firmly held at 1s. 11d. per lb., anything less being refused for good bright root.

SENNA.—To-day's auctions included nearly 950 bales, mostly of recent import and said to represent the new crop, which is reported to be a very small one. At present our total imports since the time of the first arrivals amount to 2,500 bales. The quality is certainly not particularly fine. With excellent competition the whole was sold at an advance of fully 1d. per lb. all round; fine very bold green, 1s. 0½d. per lb. (a fancy price); good to bright bold green leaves from 6½d. to 10½d.; medium green, 5½d. to 5½d.; yellowish mixed small to good, 3½d. to 4½d.; ordinary specky and dark to fair greenish mixed medium, 2d. to 3d.; and common and low, 1½d. to 1½d. per lb. The bulk of the lots ranged in price from 2½d. to 3½d. per lb.

SHELLAC.—The auctions on Tuesday embraced a rather considerable supply of shellac, though not by any means as large a quantity as had been advertised originally. The catalogues were made up of

	Cases	Cases
Orange lac	1,076	of which 574 were sold
Garnet	50	" 50 "
Button	24	" 1 "
	1,368	625

The publication, earlier in the day, of very favourable statistics concerning the article, and the general tone of confidence which has animated the shellac market lately found expression at the sales in a rise of from 2s. to 3s. per cwt. on the orange lac, and fully 4s. on garnet. The prices realised were:—*Orange*, fine bright, SD in circle, 97s. refused, 100s. being the price asked. Second orange, fair red to good strong bright, 74s. to 76s., rather dull, livery or out of condition, 72s. to 73s.; blocky, 70s. to 73s. per cwt. Worked livery and red, 73s. to 74s.; good bright, 75s. to 76s. per cwt. *Garnet* AC good free unworked, 63s. per cwt. For good firsts button, 97s. per cwt.

was refused, and one case of good mixed seconds sold at 92s. per cwt. The shipments from Calcutta to the United Kingdom in September were about 2,800 cwt., or the same as last year; and the total from November 1, 1888, to September 30, 1889, about 51,700 cwt., against 86,700 cwt. in 1887-8. The shipments to the United States in September were 2,200 cwt. The total exports from Calcutta to all parts for the seven months ending July 31 were: 1889, 58,813 cwt.; 1888, 82,829 cwt.; 1887, 108,299 cwt. The following were the prices at to-day's call:—

		Oct.	Nov.	Dec.	Jan.
TN Orange, sellers	77/	78/	78/	79/	
" buyers	75/6	77/	100 sold	78/6	
AC Garnet, sellers	66/	67/	68/	63/	
" buyers	64/	65/	66/	66/	

TEA.—China market: All low-priced Congous are firm to ½d. advance this week, and one or two large operators have been buying freely with a view to an advance in common Congou prophesied last week in a financial paper. In view of the tendency of the Indian market and the very high price of common Ceylon, it is probable we may see a further advance in the lower grades of China tea, but there is no probability whatsoever of anything of the nature of a "corner" in tea, and any attempt to bring about such a state of affairs could only end in disaster to those concerned. A few years ago the present figures of imports of China tea would have created a panic—to-day the consumption of China tea is falling off far too rapidly for any serious movement in prices. There is now a good selection of medium Kaisows, and some useful Ching-wo kinds have sold from 10d. to 11d., while a large number of Panyong sittings have been forced off in public sale from 4½d. upwards, good quality teas, but very ugly and mixed. Assams are ½d. to ¾d. per lb. dearer for the week for all grades under 8d., while everything under 1s. shows an advance. Common broken is competed for at 5½d. to 6d., and leaf at 6d. to 6½d. Nothing is to be had with any appearance or quality in Pekoe under 8½d. to 9d., though some useful teas are selling from 10d. to 1s. per lb. Ceylons are as dear as ever, and show at present no signs of a decline, common leaf teas fetching 9d. to 10d. per lb., and Pekoes, 1s.

WAX (BEES).—*Jamaica* wax was not particularly well represented to-day, but of 39 packages offered the whole sold at very steady prices, with good competition. Fine pale, 6l. 2s. 6d.; bright orange and red mixed, 5l. 17s. 6d.; good fair even brown at 5l. 10s. to 5l. 12s. 6d. Twenty-two packages fair yellow *Cape* brought 100s.; wormy, 82s. 6d. For good pale *Mogadore* nothing below 90s. is acceptable. Good bleached *American* cakes held at 8l. 10s. per cwt.

WAX (JAPAN).—Ninety cases fine white squares held at 46s., an offer of 45s. 6d. being refused.

THE AMSTERDAM CINCHONA AUCTIONS.

(Telegram from our Correspondent.)

AMSTERDAM, October 3.

At to-day's cinchona sales in this city 1,545 packages were disposed of at an average unit of fully 9c. (= 1½d. per lb.), the market being thus a little above that of the last London sales. Druggists' barks in quills and chips sold at from 11c. to 102c. (= 2d. to 1s. 6d. per lb.); druggists' root at 13c. to 15c. (= 2½d. to 2½d. per lb.); manufacturers' bark in quills, whole or broken, and chips, 9c. to 75c. (= 1½d. to 1s. 1½d. per lb.); druggists' root at 29c. to 85c. (= 5½d. to 1s. 3½d. per lb.). The principal buyers, in order of their purchases, were:—The Auerbach Quinine Works, the Amsterdam Quinine Works, the Brunswick Factory, the Frankfort and Stuttgart Works, and Messrs. C. L. Schepp & Zoon, Rotterdam.

MR. A. N. KERSHAW, chemist, Corn Mill Bridge, Keighley, has secured the contract for drugs, &c., to the Keighley Union for the ensuing six months.

MR. JAMES M. MILNE, Ph.D., F.I.C., has been elected professor of chemistry in St. Mungo's College, Glasgow; and Mr. James Swanston, M.A., has been elected lecturer on botany in the same college.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c. will be attended to in the order received.

Mr. Blunt's Process for the Assay of Ipecacuanha Wine.

SIR,—The note read at the Pharmaceutical Conference under this heading contains a suggestion of such practical value that it would be ungracious to criticise it too closely.

But a certain amount of confusion hangs over the working details, which I ask your leave to try and clear up. The process is described, in the *résumé* published in the *Pharmaceutical Journal* of September 14, as a modification in the present method of assaying the wine for alkaloid by means of Mayer's solution, and as consisting "in adding a saturated solution of mercuric chloride in potassium chloride in excess to the wine," &c. The known fact that mercuric iodide—the basis of Mayer's solution—is soluble in a solution of potassium chloride led one to suppose that this was the modification referred to, but fuller accounts subsequently published lead to the conclusion that the above quotation contains a clerical error. Perhaps the editor of the journal will kindly say if this is the right one.

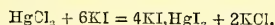
From your issue of the same date I quote as follows:—"The Mayer's solution is made by adding to 100 parts of 10-per-cent. potassium iodide solution a saturated solution of mercuric iodide [in potassium iodide], until a permanent precipitate is formed, filtering, and making up to 200 c.c. with distilled water." With this the *Pharmaceutical Journal* of September 28 is in practical accord, although I am somewhat puzzled by the statement, "It is clear that the exact strength of the solution is immaterial." Surely in any process of volumetric assay the exact strength of the solutions is a matter of the very first importance.

Having made the experiment, I find that, as I expected, no precipitate—permanent or temporary—is obtained by adding a solution in potassium iodide of mercuric iodide to another solution of the former salt. It would have been contrary to all reason and experience if it had been otherwise.

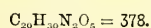
A short account of the solution known as Mayer's will, perhaps, elucidate the subject.

Each 1,000 parts by measure contain 22.7 parts by weight of HgI_2 , which is held in solution by 33.2 parts of KI, and contain also, as a by-product, 7.45 parts KCl.

It is made by dissolving 13.546 parts mercuric chloride and 49.8 parts potassium iodide in distilled water to the required measure.



The proportions set out are, therefore, one-twentieth of the molecular weights shown in this equation, and each unit of the solution will precipitate $\frac{1}{20000}$ of the molecular weight of emetine. This is given in the *Agenda du Chimiste* for 1882 as



and $378 \div 20,000 = .0189$, which agrees with the multiplier stated by Muter, "Analytical Chemistry," page 193. Professor Atfield (9th edition) gives as the formula of emetine $\text{C}_{30}\text{H}_{44}\text{N}_2\text{O}_4$, which differs from the above.

The centinormal solution of mercuric chloride proposed by Mr. Blunt is one-fifth the strength of Mayer's solution; so that, to arrive at the actual percentage of emetine in the

wines he tested, we must divide by five the quantities used; thus,

$$4.2 \div 5 \times .0189 \times 2 = .031752 \text{ per cent.},$$

and this is not far from several of the results tabulated by Messrs. Braithwaite and Umney.

The standard they propose is 1.25 per cent. for the liquid extract, and therefore .0625 for the wine.

Fifty cubic centimetres of a standard wine would remove the mercuric iodide from $.0625 \div 2 = .03125 \div .0189 = 1.7$ (nearly) c.c. of Mayer's solution, and, tested as Mr. Blunt describes, would require $1.7 \times 5 = 8.5$ c.c. of centinormal mercuric chloride solution to replace the amount precipitated.

Taking 6.8 as the mean of two readings of Mr. Blunt's second sample, the percentage shown is

$$6.8 \div 5 \times .0189 \times 2 = .05148,$$

which approaches No. 1 on Messrs. Braithwaite and Umney's table, and the agreement confirms the value of the proposed test, although I confess the solubility of mercuric iodide in a solution of potassium chloride seems a factor in the question which should not be overlooked.

Yours very obediently,

Dover, September 30.

J. F. BROWN.

[We may explain that the words in brackets, "in potassium iodide," used in our abstract of the paper, were inserted by us, as it did not appear from Mr. Blunt's paper how a solution of mercuric iodide could be obtained otherwise, that salt being practically insoluble in water. Probably a saturated solution of mercuric chloride was meant. We agree with much that Mr. Brown says in regard to the absence of details in Mr. Blunt's paper. Obviously the strength of the Mayer's solution is the kernel of the process, and if it is an indefinite quantity, the process is useless. But with properly standardised solutions there is no doubt that the process is one which is deserving of careful trial and wider application.—ED. C. & D.]

Upward Percolation.

SIR,—From practical observation I cannot agree with your remarks to "Zero" in issue of September 28. I have had in use for some months one of Tebbutt's "Patent Upward Percolators," and I find it answers splendidly. The menstruum can be kept in contact with the drug as long as desired, and that it passes through the whole marc, and, moreover, exhausts thoroughly, I am prepared to prove. Enclosed I send samples of hops, red cinchona bark, and ginger, from which I have prepared tinctures; also samples of the tinctures so prepared. You will find the marc absolutely exhausted, and the samples of tincture in my opinion far superior to those prepared by the old process, with this great advantage—that there is absolutely no loss of spirit, which has been the great drawback in preparing tinctures in small quantities. I find one, two, four, or six pints can be prepared with equally good results.

PRACTICE.

Pharmacographia Indica.

SIR,—Without depreciating in any way the value of the services rendered by the accomplished authors of the new work reviewed in your editorial columns last week, may I be allowed to point out that, in my opinion, the title "Pharmacographia Indica" is philologically incorrect. The word "Pharmacographia" means literally "writings on drugs," or a "history of drugs," and the correct translation of "Pharmacographia Indica" is "Indian writings on drugs," or "an Indian history of drugs," and not "a history of Indian drugs." In one sense the use of the collocation is absolutely correct, for the history is Indian, both as regards writing and publishing; but it is not so correct in the sense in which the authors mean it to be applied, and as, in fact, they themselves apply it in the sub-title. This is how it appears to me, but I may be hypercritical. I shall be glad to be contradicted by an authority.

Yours,

T. M. (137/36.)

Fires by Focussing the Sun's Rays.

It is a coincidence that on the day of the fire at Messrs. Burroughs, Wellcome & Co.'s works at Wandsworth the sun

shone with great intensity and heat, and it is now found that at 2.20 P.M. (the hour at which the fire broke out) the rays of the sun, passing through the southern window of the drying-room, fell exactly on the spot where the fire started; furthermore, there are still remains of white and green glass bottles which had been placed (empty) on the sill of this window to dry. As it has been suggested that the fire might have been caused by the sun's rays focussed through one of these bottles it would be interesting, and, perhaps, important, to bear from any reader who has known of fires originating from this cause the conditions under which ignition took place.

Veterinary Business.

SIR,—In your article "How to become a Veterinary Surgeon" you say "the step between veterinary surgery and pharmacy is not a big one, especially if the young pharmacist has passed the Minor." Allow me to say, as one who has made the step, that it is a very long one, and that your article is rather calculated to mislead readers, whose notions of veterinary surgeons are, as a rule, based upon a counter acquaintance with farriers, who order diapente and grains of paradise and other such rubbish without the most elementary knowledge of pharmacy. The supercilious manner in which I have been treated by chemists when writing a prescription or ordering a medicine away from home is proof sufficient that they have no idea of the amount of study and the many subjects required of the veterinary student, or of the superior remuneration of the veterinary surgeon to that received by themselves. How often does the pharmaceutical chemist receive a guinea for his opinion? Yet this is a constant fee paid to the average veterinary surgeon for his examination of a horse, which may take him half an hour at the outside.

Chemists as a body are woefully ignorant of veterinary matters, and allow stable loafers at street corners to pick up half-crowns and dollars for a recipe or a nostrum made up for use, while intelligent and highly-educated chemists are writing to your journal and lamenting that they cannot get protection from the oilman in the matter of carbolic acid and vermin powders. Every chemist in England might add to his income more or less by a little elementary knowledge of veterinary matters without injuring the regular practitioner. You have published a handbook on dispensing, &c., and I would suggest something of the kind on animal medicine, so that your clients might readily refer to and prescribe from it with safety to themselves and advantage to their clients, and I might even add to the stable loafer as well, since if he found himself like Othello with "his occupation gone," he might take to honest labour again.

I know many chemists who have your journal bound, and pay particular attention to occasional articles on veterinary matters. Would not attention to this branch of medicine be a great deal more practical than crying out for protection?

A VETERINARY CHEMIST. (133/42.)

Gratifying!

SIR,—When one sees a wholesale firm advertising its manufactures as "supplied to registered chemists only," one is inclined to think that our excessive complaining is having a good effect in some quarters. We often find those plagues of our life, "the ambassadors of commerce," glorifying their own firms at the expense of others; but for my own part I suspect a man who is not polite enough to treat his fellow-craftsmen as he himself would be treated.

Yours truly,

HEDER. (133/57.)

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Sulphonal Draughts.

137/46. H. F.—Sulphonal is not sufficiently soluble in any of the ordinary vehicles to make it possible to give the

remedy in solution. You may make a draught according to the formula given in "The Art of Dispensing," but in mixtures which are to be kept for some time the tragacanth should be omitted.

Phosphoric Acid in Pills.

135/12. *Phosphorus* wishes to know the best way of dispensing the following pills:—

Ferri phosph.	gr. xx.
Quin. sulph.	gr. xv.
Strychnie	gr. j.
Ac. phosphoric. syrup.	℥xxv.
Ft. mass. et div. in pil. xx.	

[Thoroughly triturate the strychnine with the ferrous phosphate, add the quinine, with 3 grains of tragacanth and 25 of powdered liquorice, then add the acid, and mass, using a little more liquorice if necessary.]

A Bismuth Mixture.

Sodii bicarb.	gr. x.
Liq. bismuthi (Schacht)	3j.
Liq. morph. ac.	℥v.
Aq. menth. pip. ad	℥ss.

An Inquirer (138/34) asks if the above can be made so that it may not give a precipitate in twenty-four hours. [Our experience of Schacht's bismuth is that it gives clear mixtures with bicarbonates, but in the case of the above the soda salt is doubtless partly decarbonated by the action of the morphia solution, hence the opalescence which begins to appear in a day. See note in our issue of October 20, 1888, page 563.]

Salicylate and Quinine Mixture.

138/44. *Abs* had the following mixture to dispense:—

Soda salicylat.	3iiss.
Quin. sulph.	gr. xv.
Acid. sulph. dil.	℥ss.
Tr. strophanth.	3j.
Sp. chlorof.	3vj.
Aq. dest. ad	℥x.

He decomposed part of the sodium salicylate with the sulphuric acid, and got a flocculent precipitate which rose to the surface of the mixture. This was salicylic acid, of course. He omitted the sulphuric acid and "succeeded in getting a very good mixture with only a little separation." The prescriber said that he used the same mixture in his dispensary practice and had no difficulty in dissolving the salts. We may repeat what is said in "The Art of Dispensing," page 143, that when sodium salicylate is prescribed along with acids, salicylic acid is thrown out, and is most difficult to suspend. If the sulphate of quinine in the above prescription were dissolved by the acid and then mixed with the sodium salicylate solution, there would be a precipitate of acid as well as of quinine salicylate. It is better to have only one decomposition by doing as "*Abs*" did, and, best of all, to omit the sulphuric acid.

A Gargle.

Potass. chlor.	gr. xl.
Tr. tolu.	3ij.
Glycerin.	3ij.
Syr. simp.	3ij.
Aq. ad	℥iv.

M. Ft. garg., subind. utend.

A. J. Ferriday (138/68) asks how the above may be satisfactorily dispensed. Only by adding 2 drachms of acacia mucilage to the solution of the chlorate in 3 oz. of water, then add the syrup and glycerine; shake and pour in the tincture, mixing it by one shake.

Spirit. Chlorof. Co.

SIR,—If by sp. chlorof. co. is meant the official spirit, it follows logically that it is correct to dispense the official

spirit of ether when sp. æth. sulph. co. is prescribed; such, however, is not the case.

Yours truly,
S. D. F. (139/14.)

[Logic is not always the best guide at the dispensing counter; common sense must come in sometimes. There happens to be a compound spirit of ether, but not a compound spirit of chloroform—only a compound tincture.]

Mixture and Lotion.

SIR,—I have lately met with two prescriptions, which I should like to bring under your notice:—

Hydr. perchlor.	..	..	..	gr. iss.
Ac. hydrocyan. dil.	..	..	..	ʒ 30
Emuls. amygdal.	..	..	..	ʒiv.

S. Face lotion.—Poison.

The only official emulsion of almonds is "mist. amygdal. B.P.," and "Squire's Companion" mentions no other. Should the emulsion for lotion be made by using 1 oz. bitter almonds to 8 oz. water, without sugar or gum?

Potass. iodid.	..	..	..	gr. v.
Bismuth. trisnit.	..	..	..	gr. x.
Mucilag.	..	..	..	q.s.
Aq. ad	..	..	..	ʒj.

T. d. s.

This soon turns yellow and afterwards red. Is iodide of bismuth formed, and should it be dispensed? I do not think the prescriber contemplated any decomposition. There is no change with the carbonate. H. F. (137/66.)

A Junior's Queries.

Junior (138/17) submits several dispensing problems: first, a copy of an illegible prescription, which we have under consideration, and the following:—

Sodæ salicylat.	..	..	..	..	ʒvj.
Antipyrin	..	..	..	..	ʒiv.
Mist. guaiaci ad	..	..	..	..	ʒviij.

The above on keeping, he writes, throws down a lumpy precipitate like clay—what is it and how avoided? "Junior" dispensed it by dissolving the powders in half of the cinnamon water, making the emulsion, and mixing the liquids. He wants a remedy, and states that he has also dispensed the mixture with pot. bicarb. ʒj. This also was very unsightly, and separated top and bottom. [The mixture is not a very elegant one certainly, nor is the mistura guaiaci under any circumstances. We fail to get the lumpy clay precipitate which "Junior" speaks of. We have made the mixture as written, with the antipyrin alone and with the salicylate alone. All are alike so far as diffusibility is concerned, but the mixture without antipyrin is of a beautiful green colour. The mixture with potassium bicarbonate is certainly the worst, but when allowed to stand for a little time, and shaken occasionally, the precipitate entirely settles to the bottom. The colour of guaiacum mixture is readily affected by salts and other chemical substances.] A third prescription which "Junior" submits is for a 6-oz. gargle, containing a scruple of menthol, an ounce of rectified spirit, &c. The menthol separates, and will, we may say, under any circumstances. The prescription is a nonsensical one. Finally "Junior" writes:—"In 'The Art of Dispensing,' under pill-coating—gelatine—your formula is, gelatine and water, 1-10; Mr. Martindale orders 1-4; are they both satisfactory, or is yours a misprint?" [Our formula is correct, and quite successful in practice.]

LEGAL QUERIES.

138/18. *Vet.*—You can do nothing more if the Council of the Pharmaceutical Society refuse to take action. They alone have the power to institute proceedings against unregistered persons who sell poisons. We understand from your letter that you bought a poisonous compound at the suggestion of the secretary, and we see by the letter you send us that the Council decide not to take up the matter, but do not give any reason for their inaction. We shall be

obliged if you will send us the secretary's letter, and tell us exactly what you purchased, and what you did with your purchase. We shall be glad if other correspondents will let us know their experience in helping the Pharmaceutical Council to enforce the Pharmacy Act.

133/72. *Xylonite* writes to say that he has a preparation which we will call "Omega," and which sells at 1s. 6d. A. & Co. write to him for "Omega Balm," and thinking they mean his preparation, our correspondent supplies the goods, but invoices them as "Omega" only. Subsequent orders have been sent and supplied in the same way. It appears that A. & Co. issue advertisements in which they describe the goods as "Omega Balm," but slightly altering the spelling of the word Omega, introducing a new letter at the head and omitting one in the body of the advertisement, the word Omega being in inverted commas. In the advertisement they caution the public against imitations, and state that the "Omega Balm" can only be bought direct from them or from their authorised agents, their advertised price being 2s. 6d. A purchaser received from A. & Co. a bottle of our correspondent's preparation, with his name scratched off, but the label not otherwise altered. Our correspondent in this case raises a most interesting point, and we do not think that there has been any case decided by the courts exactly on all fours with it. The ordinary circumstances are here entirely reversed, as the cases the court has to deal with as a rule are those where one manufacturer tries to pass off his own goods as those manufactured by his rival. Here we have a man buying goods of his rival and selling them as his own, making use of his rival's trade-mark, and holding out to the public that he alone is the manufacturer, and that all other goods of the same class are imitations. If A. & Co. had simply confined themselves to selling our correspondent's goods, and attaching their own name to them as vendors and not manufacturers, they would of course have been within their rights, but here A. & Co. go out of their way to make statements injurious to our correspondent and misleading to the public. The difficulty is that the public are not defrauded so far as the article is concerned, as they get the well-known preparation. They are, however, mulcted to the extent of the extra cost, as they have to pay 1s. a bottle more than if they bought it of the original proprietor. Great injury is, nevertheless, done to our correspondent, as anyone reading A. & Co.'s advertisement would be under the impression on afterwards seeing that of our correspondent that the latter was imitating A. & Co.'s goods, and there is, we think, no doubt that the Court would grant an injunction to restrain the issue of A. & Co.'s advertisement. The following decisions are not on exactly the same lines, but have an important bearing on the subject. In the case of *Thorley's Cattle Food Company v. Massam*, the evidence disclosed that both parties were in the possession of the secret for making Thorley's food for cattle, but the defendant issued advertisements stating that he alone was acquainted with the secret. The Court granted an injunction to restrain the issue of such advertisements, and the decision was confirmed by the Court of Appeal. A similar case was that of *James v. James*, decided in 1872, relating to Lieutenant James's "Horse Blister." This preparation was the invention of one Robert James, and acquired some reputation. After the proprietor's death his grandson, Robert Joseph James, who had learned the secret, put up and sold an ointment in pots resembling those which his grandfather was accustomed to use, and signed himself Robert James instead of Robert Joseph James. He represented that his was the only genuine blister, and that all others were spurious. The successors in business of his grandfather applied to the Court for an injunction, which was granted. There is one other decision which throws light on the subject, and that is the case of *Cocks v. Chandler*, relating to Cocks's Reading Sauce. A man of the name of Chandler started in business and made the same kind of sauce and called it the "Original Reading Sauce." No objection was made to the use of the words "Reading Sauce," but only to the word "original," and the Court granted an injunction. In one respect our correspondent has put himself in the wrong, and that is by not pointing out when he received the orders that his goods were named "Omega" only, and not "Omega Balm." We think, however, that this would not disentitle him to his remedy, but might affect the

question of costs. It is a pity, however, if the case is to be fought out, this loophole should be left for the defendants.

138/62. *Apprentice*.—The Shop Hours Regulation Act provides that a young person (that is, a person under 18 years of age) shall not be employed in or about a shop for a longer period than seventy-four hours in any one week, this length of time to include mealtimes. The Act was passed in 1886 by the British Parliament.

137/34. *Inquest*.—You cannot get off serving by payment of a fee, but, if it is compatible with your moral sense, you might ask the coroner's officer if he does not know some one more competent for the work than yourself. It might cost him 4s. or 5s. to find such a one, but of course you would not object to such a reasonable expenditure.

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formulae and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulae or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.

91/25. *Pendleton*.—*Piccalilli*.—See April 6, 1889, page 495.

10/90. *White Dressing for Boots*.—July 20, page 99.

135/38. *R. Smith*.—*Dubbing*.—See August 10, page 224.

135/8. *O. T. D.*—*Bromidia*.—The U.S. National Formulary recipe for this will be found in our issue August 11, 1887, page 191 (Mist. chloral. et potas. brom. co.).

134/34. *Explosive*.—*Coloured Fires*.—See June 1, page 775. Mix with caution, and note that the compounding of coloured fires without a licence is treated as a serious offence by the authorities.

136/17. *D. P. W.*—*Shaving Cream*.—See March 16, 1889, page 371; and July 21, 1888, page 92.

123/66. *J. F. E.*—*Roburite* is said to consist of (a) nitrate of ammonium with or without an admixture of nitrate of sodium and neutral sulphate of ammonium, or either of them. The Inspector of Explosives states that the amount of nitrate of sodium shall in no case exceed 50 per cent. of the total amount of nitrates present. (b) Thoroughly purified chlorinated di-nitro-benzole with or without the addition of chloro-nitro-naphthalene and chloro-nitro-benzole. It is provided (1) that such chlorinated di-nitro-benzole shall not contain more than 4 parts by weight of chlorine to every 100 parts by weight of chlorinated di-nitro-benzole; and (2) that the proportions of chloro-nitro-naphthalene and chloro-nitro-benzole shall not amount to more than 2 per cent. and 5 per cent. respectively of the finished explosive. We can give you no information regarding the explosive power of the compound. It has been alleged that the gases resulting on its explosion are poisonous, but on this point Major-General W. H. Wardell states that when used under proper and simple precautions it does not produce an injurious effect upon the health; also that the fumes are not different in kind from those produced by most other high explosives, though less in quantity.

138/51. *Spectemur Agendo*.—You must write more to the point, more briefly, and on one side of the paper only, if you expect journals to print your letters. How can the question of the sale of poisons by unqualified men be affected by the fact that natives in India can poison themselves by eating poisons obtained in the jungles?

137/16. *Young Beginner* asks for the most suitable quantities to be added to the ingredients in the following formula for **Gout, Rheumatic, and Neuralgia Pills**:—

Ferri redacti	gr. ij.
Camphoræ	gr. ss.
Strychninæ	gr. $\frac{1}{10}$
Ext. belladonnæ	gr. $\frac{1}{2}$
Pulv. opii	gr. $\frac{1}{2}$

Fiat pilula. "One night and morning."

135/25. *Pes* asks us:—"What will reduce the size of a bunion? Hoping that it will not trespass upon your valuable space too much." The bunion is not likely to become familiar to the readers of THE CHEMIST AND DRUGGIST if it is soaked with the following, applied on lint and covered with oiled silk:—

Salicylic acid	30 grains
Glycerine	$\frac{1}{2}$ oz.
Soft soap	$\frac{1}{2}$ "

Mix.

134/65. *Stain and Varnish* puts the following **Shop-window** problem. His "window frames are made of mahogany and have been French polished, but, being exposed to the sun all day, neither the polish nor the stain stands for long—they become a dull, faded, greyish brown. Could anyone suggest a stain which would stand the sun and weather, and a varnish or polish also?" [To stain, we suggest an alcoholic solution of soda. Perhaps a dull polish would give better results than a thick and bright one.]

136/35. *Aspatia*.—See last week's issue.

138/33. *Catechu*.—The particulars regarding the use of glycerine in making **Non-alcoholic Tinctures** were published in this journal for April, 1883, and are contained in a paper by Mr. F. H. Alcock, who recommends for fluid extracts a menstruum consisting of 1 fluid part of glycerine and 4 parts of water. Glycerine tinctures of non-aromatic drugs are satisfactory, but not so those containing aromatics. For drugs containing large amounts of extractive matter the menstruum is too weak, and should be one of glycerine to three of water.

138/39. *Technical*.—(1) The samples for the last announced analysis have been distributed. You will get one of the next. (2) Your mineral has the look of arsenium sulphide, but we respectfully decline to analyse it for you. (3) Sulpho-ricinoleic acid is obtained by treating castor oil with sulphuric acid. "Sulpho-ricinoleate" is a name used for it by those employed in Turkey-red dyeing, in which industry it is used as a mordant. (4) Realgar is distinctly reddish in colour. Orpiment is yellow. What simpler means could you have for distinguishing them?

139/12. *H. S. V.*—Chloral would not be much safer than opium in an infant's cordial. Try rather sodium bromide, 1 grain for three months, 1½ grain for six months, and 2 grains for twelve months.

Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

133/15. Could any of my brethren (writes *Ph. Chemist*) give me a cure for a frequent cold in the head, and also the best mode for preventing its return.

134/65. Full address of Knight & Co., soft soap makers, Glasgow.

134/55. What is dispensed for Unna's Powders?

94/36. Address of manufacturer of paper for fly-papers.

138/30. Formula for pulv. alkali co., as prescribed in Glasgow (West-end).

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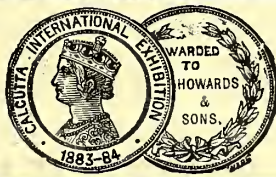
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Ext. Cinch. Liq. P.B., & H. & S.
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Now offers Sulphate of Quinine, made up into 4-grain Pills, for use in tropical climates, with directions printed in the native languages, and into weaker Pills for use in temperate climates, in Penny Boxes, each box containing either two 4-grain, or four 2-grain, or eight 1-grain Pills.

Twelve Penny Boxes are packed up together in a larger box.

These Pills are the most valuable preventive of or cure for Fever, and are also the best Substitute for Opium:

PRESENT PRICE, 8d. PER DOZEN PENNY BOXES.

To be obtained from the Principal Wholesale Houses in the Trade.
AGENTS WANTED.



SIR JAMES MURRAY'S PURE FLUID MAGNESIA.

As Prepared by the Discoverer, SIR JAMES MURRAY, M.D.

FOR OVER 60 YEARS IN USE AS AN EXCELLENT REMEDY FOR ALL DISEASES OF THE STOMACH AND LIVER.

In Summer time, and in warm climates, it is invaluable, as it cools the Blood and improves the system generally

It is the only known Drug which cures that most unpleasant of all maladies, viz., a HEADACHE. In cases of Gout and Indigestion it is indispensable.

AND IN THE NURSERY IT IS INVALUABLE. SPOKEN OF MOST HIGHLY BY ALL THE PROFESSION

Sold by all respectable Chemists, in Large sized Bottles (the 1s. size containing nearly Double the Quantity usually sold at that price), at 1s., 2s. 6d., and 3s. 6d. each. Also in Winchester Quarts for Dispensary and Hospital use.



ON.—Observe the SIGNATURE of the Inventor on EVERY LABEL.

SIR JAMES MURRAY & SON, CHEMICAL WORKS, TEMPLE ST., DUBLIN.

Wholesale Agents—BARCLAY & SONS, 95 Farringdon Street, London.



**SCHERING'S
CHLORALAMID**

New and Improved Hypnotic, Patented and Registered.
Is free from all unpleasant by or after effects usually
observed with hypnotics hitherto used.

Sold

by all Retail and Wholesale Chemists and Druggists.

SOLE WHOLESALE AGENTS—

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& 7 CROSS LANE, ST. MARY-AT-HILL, LONDON, E.C.

DOSE FROM 20 to 60 GRAINS.



BICARBONATE OF SODA,

REFINED AND RECRYSTALLIZED.

PURE AND CHEAP:

ANALYSIS.

Bicarbonate of Soda	...	...	---	---	---	97.20
Mono Carbonate of Soda	---	...	---	---	---	1.90
Sulphate of Soda	...	...	...	---	---	trace
Chloride of Sodium	...	...	...	...	---	.035
Moisture	...	---	---	---	---	.82
Insoluble	...	---	---	---	---	nil

PURE ALKALI,

GUARANTEED 58 DEGREES,
EQUAL TO 98 PER CENT. OF CARBONATE OF SODA.

Most economical form of Soda for the use of Printers,
Bleachers, Dyers; Glass, Paper, and Soap Makers.

SODA CRYSTALS

OF THE FINEST QUALITY.

BRUNNER, MOND & CO., LIM.

*Manufacturers of Soda by the Ammonia Process
(Solvay's & Mond's Patents),*

NORTHWICH, CHESHIRE.

SALICYLIC ACID

AND

SALICYLATES

(KOLBE'S)

MANUFACTURED BY

J. HAUFF, FEUERBACH - STUTTGART.

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FUERST BROS., 4 COTHALL BUILDINGS, LONDON, E.C.
 Telegrams—"FUERST LONDON." Telephone No. 462.


SEND FOR SAMPLES.

High-class Artistic

HANDBILLS
SEND FOR SAMPLES
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CHEMISTS' CALENDARS FOR 1890.

Before ordering apply to us for SAMPLES. Chemists selling Seeds should send to us for SAMPLES of our STOCK SEED CATALOGUES. Do not forget to ask for our **NEW MINIATURE SEED LIST**—most compact and useful. *Catalogues ready first week in November.*

BLAKE & MACKENZIE, Medical Label & General Printers,
 SCHOOL LANE, LIVERPOOL.

PURE SPIRITS OF WINE.

(STEAM STILL)
ONLY.

60 o.p., 18/9 per gall.; 56 o.p., 18/3 per gall.

(SPECIAL QUOTATIONS
TO LARGE CONSUMERS)**CASH WITH ORDER.**
GEORGE PHILLIPS & CO., ST. ANDREW'S DISTILLERY,
 CLERKENWELL ROAD, LONDON, E.C.

KNIGHT'S PATENT

'RELIANCE' GUM

AND

LIQUID GLUE.

In 1d., 3d., 6d., 9d., and 1s. Bottles.

REGISTERED TRADE MARK.

**THE CHEAPEST AND STRONGEST ADHESIVES
 IN THE MARKET.**
Warranted Absolutely Free from Acid.

KNIGHT & CO.

5 WATER LANE, GT. TOWER STREET, LONDON, E.C.

WHOLESALE AGENTS:—BARCLAY & SONS (Lim.), Farringdon Street, London, E.C.; F. NEWBERRY & SONS, King Edward Street, London, E.C.; S. MAW, SON & THOMPSON, Aldersgate Street, London, E.C. EDWARDS & SON, Queen Victoria Street, London, E.C.; THOMPSON, WALTERS, HOLE & CO. (Lim.), Curtain Road, London, E.C.

"CUTTING COUNTERACTED."

MOONSEED BITTERS brings FULL PRICES.

WHY?

Because every one who retails Moonseed Bitters has to sign an Agreement or Contract in the following terms:—



MOONSEED BITTERS.

Above is Facsimile of
THE WRAPPER LABEL
of the 2/9 size.

It is also sold at 4/6.

MOONSEED OINTMENT.

Retails at 1/1½, 2/9, 4/6 per box.

Memorandum of Agreement made this.....day of..... 1889, between A. E. POWELL & COMPANY, of Swindon in the County of Wilts, Proprietors of the Moonseed Bitters and Moonseed Ointment (hereinafter called the "Vendors"), of the one part and of (hereinafter called "the Purchasers"), of the other part.

Whereby it is mutually agreed between the said parties hereto as follows:—

In consideration of the Vendors selling to and supplying the Purchasers with Moonseed Bitters, Moonseed Ointment, and other preparations manufactured and sold by them (hereinafter termed "the Goods") at their usual prices, the Purchasers will observe and perform the following terms and conditions:—

1. The Purchasers to sell the Goods retail for full printed prices only, and for each and every Bottle or Box of Moonseed Bitters, Ointment, or Pills sold by him or them at any less price, without the written consent of the Vendors, the Purchasers shall pay to the Vendors the Sum of Twenty Shillings in the nature of a penalty, to be recoverable as ascertained liquidated damages.

2. The Purchasers not to supply any Wholesale House nor to sell the Goods wholesale to any Chemist or Druggist or Medicine Vendor who will not previously enter into an Agreement to retail the same at prices in accordance with the preceding Clause No. 1 of these presents.

All Purchasers who have signed a similar form of Agreement to the foregoing will be supplied upon the Vendors' usual trade terms, but those Purchasers who do not sign a similar form of Agreement to be supplied upon the following terms only, namely:—RETAIL, 4s. 5d. for each and every 4s. 6d. Box or Bottle, 2s. 8d. for each and every 2s. 9d. Box or Bottle, and 1s. 0½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. WHOLESALE, 4s. 4d. for each and every 4s. 6d. Box and Bottle, 2s. 7d. for each and every 2s. 9d. Box or Bottle, and 11½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. This Agreement and the terms and conditions herein contained to remain in full force and virtue for the term of 7 years from the first day of March, 1889.

As witness the hands of the said parties hereto the day and year first above written.

We call attention to the important steps which we have taken to prevent our specialities being retailed at less than the advertised prices, and we ask the co-operation of the Trade in maintaining the integrity of the scheme whereby the sale of our preparations may always be retained by the legitimate trade. We will not only endeavour, by all means in our power, to prevent the advertised prices being "Cut," but will give Chemists every assistance and facility for making this a large as well as a paying business.

Please write for Terms and Form of Agreement. NOTE that we allow retailers of Moonseed Bitters 2s. 6d. per thousand for the Distribution of Pamphlets.

A. E. POWELL & CO., SWINDON.

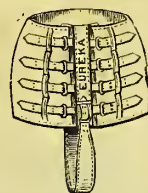


Cable Address—
'Acme London.'

Send for
Special Detailed
Price List and Circular.

PIRATES! BEWARE!!
Chemists are requested to abstain from Purchasing
their stock of Chest and Lung Protectors until they
have inspected our

**"EUREKA" MEDICATED PINE WOOL
FELT SPECIALITIES.**



HANDSOME STATUETTES,
under Glass Show-case, perfectly fitted, also
Show Cards and Circulars Free upon Stocking my Goods.

OBTAINABLE FROM EVERY WHOLESALE HOUSE.

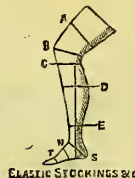
Full information from the Absolute Inventor and Manufacturer,

VINCENT WOOD,

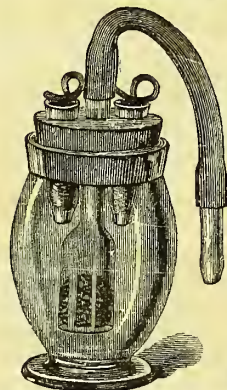
29, 30, 31 Paternoster Square,
11, 12, 13 Rose Street, Newgate Street, LONDON, E.C.

THOROUGHLY
WASHABLE.

Dépôts
at Paris, Brussels,
and New York, U.S.A.
Factories at
Stratford, Nottingham, and Rose St.



BY ROYAL LETTERS PATENT, NO. 16,713.—DECEMBER 20, 1886.



**GODFREY'S
CHLORIDE of AMMONIUM INHALER**

Catarrhal Throat and Ear Affections, Loss of Voice,
Bronchial Asthma, and Hay Fever.

The SIMPLEST FORM OF INHALER.

VERY PORTABLE. CONTAINS NO WATER.

Silver Medal, Brussels Exhibition, 1888. Yields a plentiful cloud of Neutral
Vapour, with little or no effort on the part of the patient.

SHIPPERS & LARGE BUYERS SUPPLIED ON LIBERAL TERMS

PRICE 7s. 6d. RETAIL.

May be obtained through S. MAW, SON & THOMPSON, London.
Illustrated Prospectus, with the "History of Chloride of Ammonium as a Remedial Agent,"
free by post. **SOLE MAKERS—**

GODFREY & COOKE, 30 Conduit Street, LONDON, W.
Bond Street.



JOHN SANGER & SONS

**Patent Medicine
Vendors,**



**DEALERS IN
Druggists'
Sundries,**

LOZENGES, MINERAL WATERS, PERFUMERY, AND TOILET REQUISITES.

ILLUSTRATED PRICE LISTS SENT FREE ON APPLICATION.

Sample Orders for Bronchitis Kettles, Chest Protectors, Hot Water
Bottles, Respirators, &c., &c., will receive prompt attention, and
doubtless ensure further orders.

WRITE FOR OUR LIST OF WINTER SPECIALITIES.

Agencies of all kinds undertaken upon the most favourable terms.

Warehouse & Show Room: 489 OXFORD STREET, LONDON, W.

TO THE CHEMISTS, DRUGGISTS, AND PATENT MEDICINE
VENDORS THROUGHOUT THE WORLD.

WAKE UP! WAKE UP!! WAKE UP!!!

We wish you to understand that the great "boom" in the Patent Medicine Market during the ensuing season will be

KOPTICA! KOPTICA! KOPTICA!



THE FAMOUS

PERSIAN HERBAL REMEDY

FOR

Rheumatism, Gout, Lumbago, Sciatica,

RHEUMATIC GOUT,



Neuralgia, Face Ache, Tic-Douloureux, Cramp
AND
ALL KINDRED DISEASES.

MOST of you are aware that **Koptica** was first put on the market about ten years ago, and at once found favour with the public because of its unrivalled efficacy as a curative in all Rheumatic affections. Testimonials poured in from all quarters of the globe, and although **Koptica** has hitherto been by no means extensively advertised, a steady demand has been maintained, mainly through the recommendations of those who have personally tested the

MARVELLOUS EFFICACY OF "KOPTICA."

We are now so thoroughly satisfied as to the intrinsic merits of **Koptica**, that we intend to "boom" **Koptica** as **Koptica** has never been "boomed" before.

COMMENCING EARLY IN OCTOBER,

We shall advertise to such an extent that, in due course, **Koptica** shall be known far and wide. The leading journals will have "bold advertisement" of **Koptica**, and no sufferer from Rheumatic affections shall remain in ignorance as to what **Koptica** is, and where **Koptica** can be obtained. We want every Chemist and Patent Medicine Vendor to keep **Koptica** in stock, because we mean every Chemist to be asked for **Koptica**. We know that you are being asked for **Koptica** now, and that a good many of you can't supply **Koptica** because you don't stock **Koptica**, and then your would-be customer writes to us direct, and says:—"Please send me a bottle of **Koptica**, for which I enclose stamps, with 2d. extra for postage. I tried to get it at my Chemist's, but he said he didn't keep it, and thought you must be dead, as he hadn't seen it advertised lately." Now we want you to understand that we are not dead—we are

ALIVE!

ALIVE!!

ALIVE!!!

AND WE MEAN TO

ADVERTISE, ADVERTISE, ADVERTISE

KOPTICA,

until **Koptica** is, as **Koptica** deserves to be, the best-known remedy in the market for all Rheumatic affections.

WE SHALL SPEND MONEY FREELY

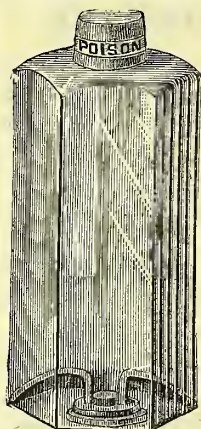
in advertising **Koptica** during the ensuing season, and so we want you to lay in a little stock, so as to be prepared to supply your customers when you are asked for **Koptica**. We do not, of course, expect you to invest largely in **Koptica** until we have created a demand for **Koptica**; but we shall be glad if you will order just a little—say only three bottles of **Koptica**, which you can obtain from your wholesale house at a cost of about 2s., and then you will be able to supply **Koptica** the very first time you are asked for **Koptica**; thus you will not lose your custom, as some of you do now, by not stocking **Koptica**. Bear in mind that by failing to supply **Koptica** when you are asked for **Koptica**, you lose not only your profit on **Koptica** but also on the other articles that your disappointed customer might purchase—then you cry out that "trade is bad," when, as a matter of fact, trade is better than it has been for years. So

DON'T DISAPPOINT YOUR CUSTOMERS.

Send for, say, three bottles of **Koptica** from your wholesale house. Newbery, Barclay, Sangers, Hovenden, Whiteley, Barker, Sutton, Lynch, Evans & Lescher, Butler & Crispe, Thompson, May Roberts, &c., &c., all stock **Koptica**, and can supply you with any quantity on the best terms; they can also supply you with handsome show cards and books of testimonials, and we will advertise for you locally, as well as generally. **Koptica** is neatly made up in bottles, which are enclosed in a handsome lithographed outer cartridge, making an attractive addition to the window or counter. The bottles retail at 1s. 1½d., 2s. 9d., and 4s. 6d., and contain respectively 12, 36, and 60 doses, so that **Koptica** has everything in its favour, and is bound to sell; but be sure you lay in a small stock of **Koptica** early in October, so as to be in a position

NOT TO DISAPPOINT YOUR CUSTOMERS.

"KOPTICA CURE," 392 STRAND, LONDON, W.C.



NEW POISON BOTTLE

**HERMES' PATENT.
REDUCTION IN PRICES.**

THIS Bottle supplies a want which has long been experienced by the Trade for a reliable and inexpensive Poison Bottle. The mouth of Hermes' Patent Poison Bottle is at the bottom of the bottle, and before its contents can be poured out the bottle must be reversed; this action being so entirely novel compels the most thoughtless person to reflect as to its contents.

PRICES, PER GROSS, fitted with Boxwood-topped Corks, complete:—

3-oz., 15/- ... 4-oz., 16/- ... 6-oz., 17/6 ... 8-oz., 20/-

The Patentee has appointed as his Sole Manufacturers,

**E. A. HEARN & CO., GLASS BOTTLE MANUFACTURERS,
381-3 KINGSLAND ROAD, LONDON, E.**

DISPENSING BOTTLES & PHIALS

WE NOW SUPPLY OUR CELEBRATED

6 and 8 oz. Bottles at 7/6 per gross.

3 „ 4 oz. ditto 6/6 „

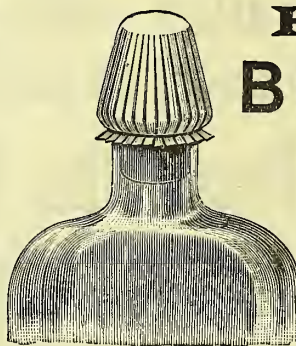
All other Sizes and Kinds equally low.

I. ISAACS & CO.

GLASS BOTTLE MANUFACTURERS,

25 Francis St., Tottenham Court Road, London, W.C.

Established upwards of 50 years. Bankers: London and Westminster Bank.



HUNT'S BOTTLE CAPS

Pleated Paper, from 8d
per Gross.

LONDON:

25 Great Windmill St., W.

Depot of DIGNE'S ENZYMES.

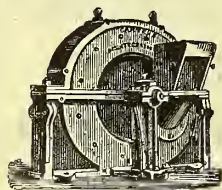
CARTER'S DISINTEGRATORS

Will Pulverise, Granulate, or Shred almost any Mineral, Vegetable, or Animal Substance.

NEARLY 1,300 IN USE

IN ALL PARTS OF THE WORLD.

For Grinding Sugar, Bark, Linseed, Ginger, Pepper, Spices, Salt, &c., this Machine is invaluable. Made in 9 Sizes. Illustrated Catalogue may be obtained on application.



Samples of ANY Material will be Ground free of charge.

J. HARRISON CARTER, 82 Mark Lane, LONDON, and 3 Rue du Louvre, PARIS

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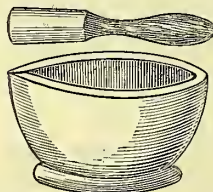
WEDGWOOD ACID-PROOF MORTARS AND PESTLES.

ALSO MANUFACTURERS OF
Funnels, Evaporating Pans, Electric Battery Fittings, Bed Pans, Urinals, Medicine-Spoons, Physic Cups, Sick Feeders, Bleeding Basins, Medicine Measures, Eye Cups, Inhalers, Nursery Lamps, Wall Tiles, &c.

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ILLUSTRATED LIST OF FANCY BRUSHES

(100 pages) JUST PUBLISHED, AND CAN BE HAD ON APPLICATION

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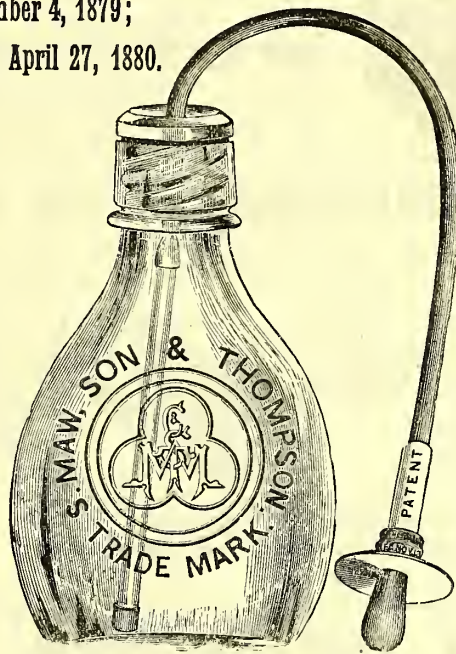
S. MAW, SON & THOMPSON'S FEEDING BOTTLES.

Patented in England, December 4, 1879;

Patented in the United States, April 27, 1880.



THE ALEXANDRA. (Earthenware Cap.)



THE EXPORT. (Glass Screw Stopper.)

	White Fittings			Black Fittings		
Alexandra, Wood Top Corks .....per doz.	3/-	3/8	—	3/3	4/3	—
Alexandra, Glass Screw Stoppers	—	4/-	—	3/9	4/6	—
Export, Wood Top Corks.....	2/9	3/6	—	3/3	4/-	—
Export, Glass Screw Stoppers	—	4/-	—	3/9	4/6	—

The following are sent out with Black Fittings unless ordered to the contrary.

	With Ordinary Fittings			With Valve and Patent Fittings		
Alexandra, Earthenware Caps .....per doz.	—	7/6	11/-	—	8/6	12/-
Alexandra, Glass Screw Stoppers	—	7/6	11/-	—	8/6	12/-
Export, Earthenware Caps.....	—	7/-	—	—	8/-	—
Export, Glass Screw Stoppers	—	7/-	—	—	8/-	—

SPECIAL DISCOUNT FOR QUANTITIES.

Not less than £5 worth each or assorted... 15 per cent. off Invoice and 5 per cent. Cash.
 Not less than £10 worth each or assorted... 20 per cent. off Invoice and 5 per cent. Cash.

Carriage paid to any part of the United Kingdom, Isle of Man, and Channel Islands, at the following discounts:—

Not less than 1 gross each or assorted ... 5 per cent. off Invoice and 5 per cent. Cash.
 Not less than £5 worth each or assorted... 10 per cent. off Invoice and 5 per cent. Cash.
 Not less than £10 worth each or assorted... 15 per cent. off Invoice and 5 per cent. Cash.

S. MAW, SON & THOMPSON, 7 to 12 ALDERSGATE STREET, LONDON, E.C.

PONTIFEX & WOOD, LIM.SHOE LANE,
LONDON, E.C.

THE
"FARRINGTON"
 NEW PATENT
PUMPS.

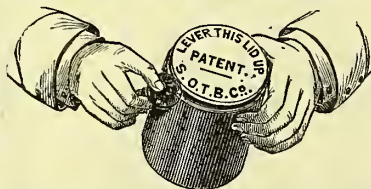
Made in various materials, suitable for Hot and Cold Liquor, Wines, Spirits, Oil, Vinegar, and Acids generally.

THE SELF-OPENING TIN BOX CO.

(Griffin's Patents.)

Albion Tin Works, York Road, King's Cross, N.

The largest
Tin Box
Works in the
Kingdom.
Ten Prize
Medals
have been
awarded.



Tins of
all kinds for
Oils, Paints,
Drugs,
Tea, Coffee,
Milk, Syrup,
Preserves,
Vaseline, &c.

Persons requiring Self-opening Tin Boxes are invited to apply at the Works for our revised Net Price List.

Special Quotations for Quantities, &c.

Telegraphic Address—"TIN BOX LONDON."

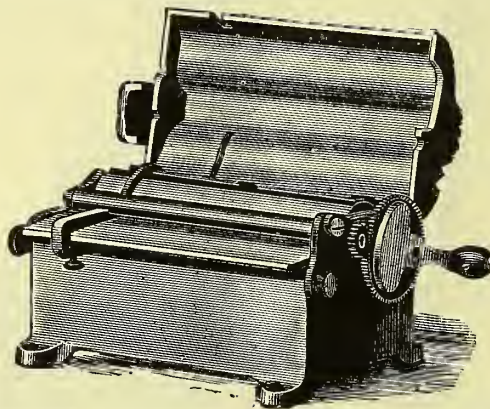
JOHN HOLROYD & CO., LIM.

Engineers, Tool Makers, and Machinists,
TOMLINSON ST. WORKS, HULME,
MANCHESTER.

**MACHINES FOR MAKING
COMPRESSED TABLETS.**

MACHINES FOR GUMMING

Either an entire surface or the edge only of Labels,
Wrappers, &c.



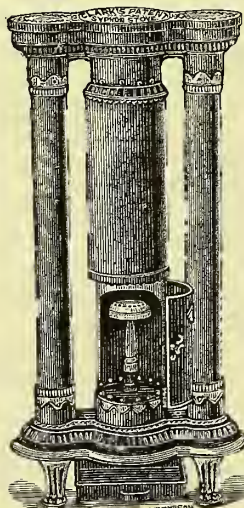
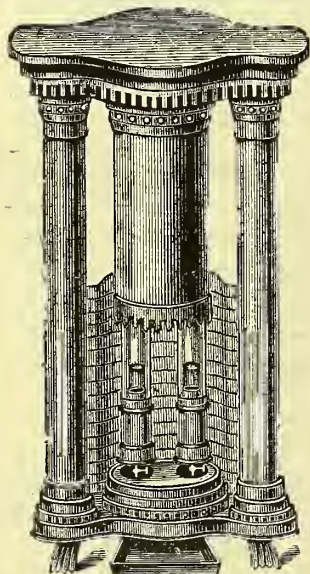
Machines Built to Contract for Inventors and Merchants.

TO CHEMISTS AND DRUGGISTS.

AGENTS WANTED FOR THE SALE OF CLARK'S PATENT

"SYPHON" (REGISTERED TITLE) HYGIENIC CONDENSING GAS HEATING-STOVES.**NO FLUE REQUIRED. ARE FREE FROM SMELL OR SMOKE.**

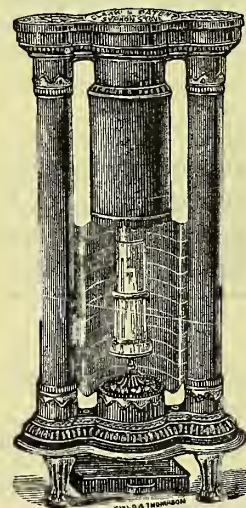
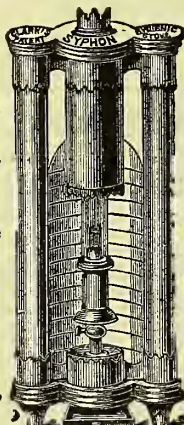
All injurious vapours are reduced to harmless liquid inside the Stove, and passed out at foot into a tray provided for that purpose.



For Use in Hospitals, Sick
Chambers, Bedrooms, Halls, Con-
servatories, Churches, Schools, &c.

Specially
suitable for
patients
suffering from
Bronchial
affections, as a
moist
atmosphere
is obtainable
when
required.

For Terms,
Particulars,
and Prices,
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**S. CLARK & CO., Patentees and Makers, Syphon Works, Park Street, ISLINGTON, LONDON, N.**

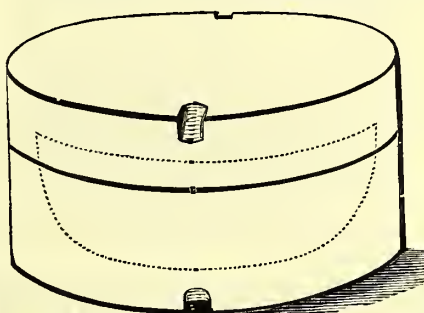
Telegraphic Address—"SYPHON STOVES LONDON."

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TOOGOOD'S IMPROVED PATENT EARTHENWARE COVERED POTS

Are claimed to be the most
perfect and convenient yet offered to
the Trade.



*Owing to the increasing demand
for our Patent Pots, we have in-
troduced a Special THIN Series
for Dispensing.*

*These Pots are beautifully
glazed and finished, and, being
very light, are specially adapted
for sending by post.*

ORDINARY THICKNESS—											
1 dr.	2 dr.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8	ounces.
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{7}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{2}{2}$	$\frac{2}{10}$	$\frac{3}{4}$	$\frac{4}{6}$	$\frac{5}{6}$	per doz.
THIN FOR DISPENSING—											
$\frac{1}{7}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{1}{11}$	$\frac{2}{2}$	$\frac{2}{4}$	$\frac{3}{3}$	$\frac{4}{8}$	$\frac{5}{5}$	$\frac{6}{6}$	$\frac{8}{8}$	ounces.
											per doz.

Forwarded Free to all parts of the World on application, enclosing business card.

WILLIAM TOOGOOD'S NEW ILLUSTRATED PRICE CURRENT

OF

Glass Bottles, Glassware, Earthenware,
Apparatus, Implements, and Utensils,
FOR THE USE OF CHEMISTS AND DRUGGISTS.

DRUGGISTS' SUNDRIES OF ALL KINDS.

Colonial and Foreign Enquiries and Correspondence solicited.

B. NOAKES & CO.

142 SPA ROAD & DOCKLEY ROAD, BERMONDSEY, LONDON, S.E.

METALLIC CASK MANUFACTURERS & TIN-PLATE WORKERS.

STEEL BARRELS,

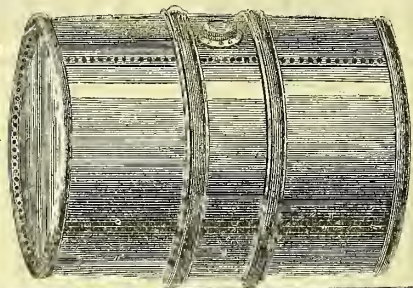
Capacity 40 to 120 Gallons,

AS PER ILLUSTRATION.

IRON KEGS, IRON DRUMS,

SUITABLE FOR

All kinds of Chemicals, Varnishes,
Paint, Spirit, &c.



These large Steel Casks, similar to sketch, can be handled with equal facility to wooden barrels, and, owing to their strength and durability, can be used over and over again for an indefinite period. They are perfectly liquid tight, being tested at a very high air pressure, and, unlike wood, do not absorb any of the contents. They are all fitted with interchangeable screw bungs, and can also be fitted with screw plug in head, for draw-off tap.

They are specially adapted for all kinds of Chemical Products, Sulphuric Acid, Glycerine, Spirits, Oils, Turpentine, Petroleum, Benzoline, Varnishes, Tar, Naphtha, Mineral Extracts, and Inflammable Liquids of every description.

We are making them in three qualities, "Black Steel," "Lead Coated," and "Tinned."

Telegraphic Address—"NOAKES LONDON."

PRICE LIST ON APPLICATION.

NOAKES' PATENT LEVER TINS.

AIR-TIGHT TIN. NOAKES' PATENT.



Opens without a Knife.

"No better tins can be found."—*European Mail*, 9th May, 1889.

Eminently suitable for packing
MIXED
PAINTS,
SYRUPS,
FRUITS,
CREAM,
HONEY,
JAMS, &c.



Patent Rings, Lids, and Bottoms, supplied loose for Export,
or to Firms making their own Tins.

Levering open with a Coin. NOAKES' PATENT.



Closes without Solder.

"A Tin which can safely be recommended to the attention of packers."—*The Grocer*, 30th July, 1887.

THE NEATEST TIN.

THE MOST AIR-TIGHT TIN.

NO SHARP EDGES.

NO CUT FINGERS.

"Possesses important advantages over others of a somewhat similar kind."—*British Trade Journal*, 1st July, 1887.

NO SOLDER USED.

NO KNIFE REQUIRED.

EASILY OPENED.

EASILY CLOSED.

EVERY OTHER DESCRIPTION OF BOX FOR CHEMISTS

Such as Decorated Tin Lozenge & Tooth Powder Boxes, Round, Square, or Oblong, &c.

In the High Court of Justice, Chancery Division.

GRIFFIN v. NOAKES, 1887. G. No. 1188.

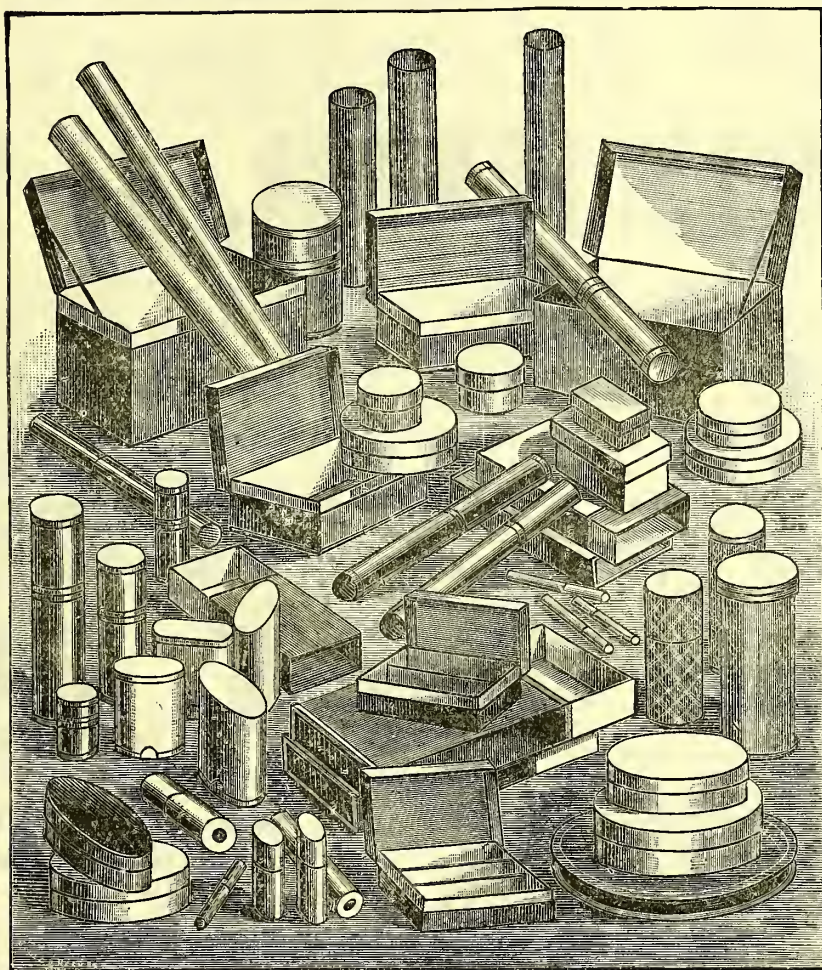
PATENT SELF-FIXING LEVER TINS.—This action has now been decided in our favour.

WRITE FOR PRICE LIST No. 6.

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BOXES FOR

Baking Powder.
Brushes.
Bottles.
Camphor.
Capsules.
Cotton Wool.
Disinfectants.
Confectionery.
Essential Oils.
Perfumery.
Fancy Soaps.
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Pills.
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Powders.



Sponges.
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Starch.
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Cement.
Lozenges.
Horse Powders.
And
For Export.

ESTABLISHED OVER HALF A CENTURY.

Austin & Co.

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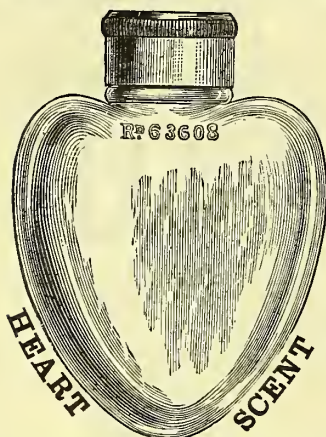
FANCY CARD & OTHER BOXES, ROUND, OVAL, OR SQUARE.

Office and Warehouse } 8 GREVILLE ST., HATTON GARDEN, LONDON, E.C.

Steam Works—BROAD YARD, TURNMILL STREET.

Send your Sample
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compare prices.

Workmanship
and Punctuality
guaranteed.



R. H. BARRETT,

Flint Glass Bottle Works,
THE OVAL, CAMBRIDGE HEATH, LONDON, E.
THE HEART SCENT BOTTLE (Reg.), for Salts or Perfume.

Is most admirably adapted for pocket use, combining great beauty of design with the maximum of convenience.
Price, Plain or Fluted (in 5 GROSS lots):—Assorted WHITE and COLOURED, 12/6 per gross.
N.B.—The Caps for these will be fitted, if desired, with indestructible washers, to resist the action of ammonia, which destroys cork in a short time.

METAL SCREW-CAPPED LIMES, in White Flint, Actinic Green, or Amber.
The Best Bottle for Glycerine or Pills. Prices: 1 oz. 13/6, 2 oz. 15/-, 3 oz. 18/-, &c. per gross.

Chemists' and Perfumers' Bottles in great variety, Plain or Stoppered.

Orders may be sent to the **PRINCIPAL WHOLESALE HOUSES.**
TELEGRAPHIC ADDRESS—"FOREFRONT LONDON." [3]

CARBOLIC POWDER, £4 TON.

1-ton lots and upwards.

CARBOLIC PINK POWDER, 5/-, 7/6, and 10/- per cwt., in bags or casks.

WHITE CARBOLIC POWDER, 10 %, 15 %, and 20 %, equally cheap.

HANDSOME LARGE DECORATED BLACK AND GOLD TIN BOXES.

Holding 1½ lb. (usual 1/- size), 4/6 doz. Ditto, **LARGE SIZE** (usual 1/6 size), holding about double quantity, 6/- doz.

PALE CARBOLIC ACID, 99 per cent. (No. 5), and **CHLORIDE OF LIME** below market prices

CRUDE CARBOLIC ACID (Brown), 1/-, and 1/6 Gallon; also in patent stoppered bottles, labelled.

SANITARY FLUID or **CREOSOL** (to be used with 100 parts of water, making a *milky fluid*), half usual prices.

All goods delivered free in London or suburbs, or to rail or docks. **THE CHEAPEST HOUSE IN THE TRADE.**

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CHALMERS' PATENT SAMPLE AND PARCELS POST BOX.

THE ONLY BOX

That fulfils ALL the requirements of the POST OFFICE.



Is fastened **INSTANTLY**.

Cannot open by accident.

Is immensely strong.

Has no corners.

No seams, joints, nor solder.

Nothing to scratch or tear letters.

Is practically air-tight:—Is used for Flour, Cherry Blossom, Sanitas, and Soap-Powders.

Dispenses with string, bags, and paper.

Saves 19 minutes out of 20.

94,500 SOLD IN THREE MONTHS

SAVING THEIR OWN COST.

W. B. CHALMERS 37 MINCING LANE, E.C.

WILEY'S CHEMICAL ESSENCE

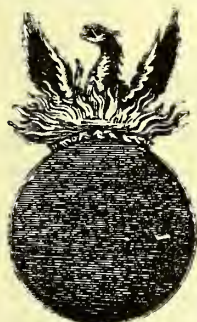
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LAMENESS IN HORSES.

Agents Wanted in every Town. Handbills, with Name and Address, supplied gratis.
50 YEARS' UNBROKEN SUCCESS.

SOLE MAKER & PROPRIETOR, J. ROOKLEDGE, CHEMIST, EASINGWOLD, YORKS.
TO BE HAD OF USUAL WHOLESALE HOUSES.

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BALL DENOTES
COLOUR OF PAINT.

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HARD LUSTROUS ENAMEL,
IN ALL THE ART SHADES.

For all kinds of decoration on Wood or Iron. Dry with a surface like Porcelain. Sold in small or large Tins, or in bulk. Prices and shades on application.

WHITE LEAD, ZINC WHITE,
PAINTS & COLOURS OF ALL KINDS.

MIXED PAINTS READY FOR USE,
In Tins, 1, 2, 4, 7, and 14 lbs. each.

HIGH-CLASS VARNISHES

Of all kinds, for Coachbuilders, Decorators, &c. OIL BOILERS, REFINERS, & MERCHANTS
Export Orders receive special and prompt attention.

GENUINE INSECT POWDER

Dalmatian, from Closed Flowers.
In Original Kegs, 160s. per cwt., 1s. 8d. per lb.

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WHOLESALE AND EXPORT DRUGGIST,
12 Laurence Pountney Lane, Cannon St., London, E.C.

TELEGRAMS: "ALSACE LONDON."

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JAMES BURROUGH, S.V.R.

58
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60
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CALE ST., CHELSEA, S.W.

and Methylated Spirit

AT LOWEST PRICES.

WRITE FOR QUOTATIONS.

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WHOLESALE AND EXPORT DRUGGISTS
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SOLE MAKERS OF

O. F. H. SKELTON, ESQ., M.R.C.V.S.L.,
Leyton, Essex,

Writes:— April 5, 1889.
I have great pleasure in saying that your Quinine Tonic Ball exceeded my anticipations. Horses in low condition, and those recovering from illness, showed marked improvement after treatment with them. The Quinine Tonic Ball should prove a boon to all owners of horses.



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Shrewsbury,

Writes:— May 20, 1889.
I have used your Quinine Tonic Balls, and consider them invaluable for animals recovering from any severe illness, specially from influenza.

GABRIEL & TROKE'S QUININE TONIC and STIMULATING GELATINE CAPSULED HORSE BALLS

(Registered No. 81,291),

Alterative, Condition, Cordial, Cough, Diuretic, Fever, Physic, and Worm Balls.

GABRIEL & TROKE WERE THE FIRST MAKERS OF GELATINE CAPSULED HORSE BALLS.

R C TREATT Dunster House Mining Lane
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IMPORTER OF

Musk Civet Ambergris Attar - of - Rose

ESSENTIAL OILS

Wholesale and Export only.

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WHITE AND SOUND TEETH.

JEWSBURY & BROWN'S

ORIENTAL TOOTH PASTE.



This old-established and increasingly favourite Dentifrice has been over Sixty Years before the Public. It is warranted to retain its properties and keep in good condition in any climate. The original and only genuine is manufactured solely by

JEWSBURY & BROWN, Chemists, MANCHESTER,

and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed. Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered. Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d. The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on receipt of address cards and directions for enclosure.

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**DISTILLERS AND EXPORTERS,
KIZANLIK, BULGARIA.**

Agent for Great Britain—G. P. BAKER, 19 Ivy Lane,
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THE OTTO OF ROSE which this house distills and exports is known above all by the absolute purity of its quality and the unexcelled sweetness and strength of its odour. It is guaranteed to be the finest essence produced in the famous Rose Valley of Bulgaria.

GOLD MEDAL, Hygienic Exhibition, Ostend, 1888.



This entirely new and excellent HEALTH-GIVING PREPARATION SOFTENS THE WATER, gives it a MOST DELICIOUS ODOUR, and BEAUTIFIES THE COMPLEXION in an extraordinary way. See the Trade Mark on every box. Sole Manufacturer and Inventor, H. MACK, Uim a D. Export from all Wholesale Houses.

Wholesale Agents for Great Britain, OSBORNE, GARRETT & Co., London, W.



The only preparation for the Hair recommended by leading Physicians for the removal of Scurf, allaying irritation, preventing greyness and baldness, and producing a

LUXURIANT HEAD of HAIR.

In Bottles to retail at 1s. 6d., 2s., 2s. 6d., 3s. 6d., 5s.
Revised Wholesale Prices, 12s. 6d., 16s. 6d., 20s., 30s., and 42s. per dozen
Supplied by all Wholesale Sundry Houses,
OR FROM THE DEPÔT—

OSBORNE, GARRETT & CO., 51 Frith St., Soho, London, W.

**THE IMPROVED MUSTARD PLASTER THAT
NEVER BLISTERS THE SKIN.**



**COOPER'S
SINAPINE MUSTARD
TISSUE PAPER.**

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Inventors and Sole Manufacturers:
COOPER & CO.

Pharmaceutical Chemists,
GLOUCESTER ROAD, SOUTH KENSINGTON, S.W.
Established 1863.

May be obtained of Wholesale Agents throughout the civilised world.

**H. P. TRUEFITT'S
SPECIALITIES FOR THE HAIR.**Floral Extract, 3/6, 5/-,
10/6, 21/-Egg Julep, 2/-, 4/-
CONCENTRATEDEgg Julep, 2/6,
5/-, 10/6.Golden Fluid,
10/6, 21/-.EUXURON,
1/6.
&c.Stimulating Lotion, 5/-
10/6.Astringent and Tonic
Lotion, 5/-, 10/6.

Quinine and Arnica

Hair Wash, 3/6,
5/-, 10/6, 21/-.Arnica Wash,
3/6, 5/-,
10/6.
&c.

EUCHRISMA.
Combines in one clear Fluid every valuable
Component part of a Hair Grease and Wash,
3/6, 5/-, 10/6, 21/-.

EAU RACINE.
For renewing the original colour of Gray Hair,
superior to all other Restorers. Price 6/-.
Simple in its Components.

An elegant Preparation for
the Hair and Beard.
Price 2/6, 3/6, 5/-, 10/6, 21/-.

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(BY ROYAL LETTERS PATENT.)

PRICE ONE SHILLING.

20 & 21 Burlington Arcade; 13 & 14 Old Bond St., London.

SEABURY'S MUSTARD PLASTERS**ARE THE BEST.**

On cloth	100 10 6 3 leaves; 1/4	1 10/ 84/ per doz.	5-yard rolls
	84/ 10/ 6/ 3/	7/ 10/ 12. in wide	
		6 in. 6 in.	

On paper	100 50 10 leaves; 1 yard	7/ 60/ per doz.	5-yard rolls
	60/ 30/ 7/	7/ 12 in. wide	
		6 in. 12 in. wide	

Seabury's Half-strength Mustard Plasters on Paper, 10 leaves
in box, 7/ per dozen boxes.*These Plasters are intended to meet the wants of persons of
specially sensitive skins, who cannot endure the activity of
full strength.***SUBJECT TO DISCOUNT.** [1]**SEABURY & JOHNSON,**

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NEW YORK. MONTREAL. HAMBURG.

GREENSILL'S THE ORIGINALWhen
ordering
from**MONA**

AND ONLY

GENUINE.

Wholesale Houses

please specify

"GREENSILL'S."**BOUQUET**

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T. S. GREENSILL & SON

LOCH PARADE,

DOUGLAS, ISLE OF MAN.**BRODIE'S IMPERIAL HAIRDYE.**

(REGISTERED.)

ONE LIQUID. — Harmless, Perfect, Permanent, and
Odourless. Clear, and without Sediment.*Guaranteed to contain no lead, or any other noxious ingredient.***BLACK, BROWN, LIGHT BROWN, OR GOLDEN.**

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No. 2.	2s. 6d.	--	--	17s. 6d.
No. 3.	3s. 6d.	--	--	24s. 6d.
No. 4.	5s. Od.	--	--	35s. Od.
No. 5.	10s. 6d.	--	--	78s. 6d.

J. BRODIE, 41 Museum Street, **LONDON, W.C.****PERFUME SPRINKLERS,**

HAIR WASHES, CREAMS,

OILS, INKS,

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BY SANFORD'S RAT POISON.

"I have found 145 rats killed in my farm buildings by it."—C. Wilson Offord.
"It is the most certain remedy I have ever tried. Little pellets about the size of a pea are put in the rat holes or in their runs. I destroyed over 200 rats from one dressing with it."—C. Cook, Grange Farm, Ellesmere, Salop. It is, without doubt, the best ever introduced. Price 6d., 1s., 2s., and 3s., of Chemists.
SANFORD'S MICE POISON for Houses, Buildings, Corn Stacks, &c. Cannot be excelled. Has given entire satisfaction for the past 28 years. In packets 3d., 6d., 1s., and 2s. each, with directions for use, of SANFORD & SON, Sandy, Beds. Liberal terms to Chemists. Wholesale of Barclay & Son, Sanger & Son, Newbery & Sons, Edwards, and others, London (England).

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SPECIALITIES: Glycerine—Gum Arabic—Gum
Tragacanth—Pure Beeswax—Honey—Vanilloes.

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MANUFACTURING CHEMISTS,
AND WHOLESALE AND RETAIL DRUGGISTS,

KALBADEVIE ROAD, BOMBAY.*Agencies and Consignments of Goods solicited.***Jn. GIRAUD FILS**

FINE PERFUMERY AND TOILET SOAPS,
GRASSE, FRANCE.

FIRST PRIZES AWARDED AT EVERY EXHIBITION.
Large Gold Medal at Nizza, 1884. First Order of Merit, with Special Mention, at the Melbourne International Exhibition, 1888-1889.

SPECIALITY.—Essences, Toilet Waters, Extraits and Soaps & la
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BLEACHED AND ABSORBENT WOOLS,
GREY WOOL, COLOURED WOOLS, & JEWELLERS' SHEETS,

Were awarded at the Paris Universal Exhibition, 1889, Two Silver Medals
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MOUILLA LIQUID SOAP

The invention of Dr. DUNCAN, St. Petersburg.
Beautifully Transparent Golden Colour. Delicately Perfumed.
As prescribed by most eminent Skin Physicians.—See Testimonials.
In handsome bottles with sprinkler tops. Retail, 1/-, 2/6, 4/-
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PRECIPITATED CHALK, WHITEST AND
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CHEAPEST SELLERS IN THE MARKET.
ALSO **CHEMICALS, DRUGS AND OILS.**

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OL. LAVAND. RECT.

(DURRANT).

This is the only real substitute for Mitcham Lavender. 1 lb. 15/-, ½ lb. 8/-,
¼ lb. 4/3. 1 lb. sent post free, with first-rate formula for Lavender Water,
for 15/6.

G. R. DURRANT, Perfumer, HERTFORD.**MUSK** EDMOND RAQUET,
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Successor,
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PARIS.**S. SAINSBURY'S**

Prepared from the finest
English Lavender and
other most choice Scents.

Lavender

176 & 177 STRAND, LONDON. **Water.**
Wholesale and Shipping terms on application.

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THE
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MARK STREET MILLS,
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LIVERPOOL.

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LIBERAL TERMS TO CHEMISTS. Write for Pamphlet and Circular,
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S. V. R. 18/9 per gall., 56 o.p. } Cash with order.
19/3 " 60 o.p.

S. V. METH. 2/2 per gall., 61 op., 30 gall. eks.
2/4 " " 12 " tins

ABSOLUTE ALCOHOL, 79s. 3/ per lb.

VIN. AURANTII .. 4/- and 4/6 per gall.

VIN. XERICUM .. 6/6 and 7/6 "

Dutton St. Distillery
MANCHESTER,
A. MACNAIR & CO.

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DRUG AND GUM MERCHANTS AND IMPORTERS,
16 Philpot Lane, LONDON, E.C.

SPECIALITIES—

Arabic and Varnish Gums, Glucose, Glycerine, Beeswax,
Honey, Rhubarb, Insect Powder, Saffron, &c., &c.

Country orders for original packages included in public sale purchases at fractional
margins.

QUIBELL BROTHERS,

MANUFACTURERS OF

GLUE, SIZE, GREASE, &c.

NEWARK-ON-TRENT, NOTTINGHAMSHIRE.

PURE WHITE BEESWAX

Guaranteed pure, of the best quality, in blocks, cakes, or other forms.
Candles, and all other articles manufactured of Beeswax,
at the lowest possible prices.

QUOTATIONS FREE ON BOARD HAMBURG AND OTHER PORTS.

Lüneburger Wax Bleaching Works, Lüneburg (Germany).

EMP. CERAT. SAPONIS.

ON FINE SHIRTING, 16 IN. WIDE.

6s. per Dozen net cash.

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LONDON "STOMACH WASH"

AND LIVER CORRECTOR (Registered).

This pure, health-restoring aperient cleans the coats of the stomach, and increases the activity of the liver. To be obtained of Chemists, and of Messrs. BARCLAY & SON (Lim.), 95 Farringdon Street, London; price 2/6; sample bottles, by post, 2/9.
Sold in Cases containing six bottles.

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AGENTS WANTED. The "ACME" AGENTS' CASE, £3 3s.—Retail Value, £9.

HOMOEOPATHY

PHOTO-PRINT of this HANDSOME CASE free on receipt of Post Card.

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S.V.R.

PURE GRAIN SPIRIT 56 O.P., B.P., 18/5, used by the principal

Do. Do. DOUBLE DISTILLED 18/9

Cash with Order.

Reductions for Quantities.

SAMPLES FREE.

STEPHEN SMITH & CO., BOW, LONDON, E.

S.V.R.**SPECIALITY FOR PERFUMERY.**

This pure grain spirit, which has been thrice rectified and filtered through charcoal, is being largely used in making high-class Perfumes.

Price, 19/-, 36 o.p.; 19/6, 60 o.p. Cash with order.

Reductions for Quantities.

STEPHEN SMITH & CO., BOW, LONDON, E.

BEESWAX.

W. H. B. WHITE { put up in 2-lb. parcels in cases of 54 lbs.

W. H. B. REFINED { in 2-lb. cakes in cases 130 lbs. 1-lb., 1/2-lb., 1/4-lb., and oz. cakes.

The purity of these goods is certified by the following eminent chemists: S. P. Sharpless, State Assayer, Boston; J. W. Taylor, Associate of the Society of Public Analysts of Eng., Montreal, P. Q.; Edward Davies, F.C.S. and T.I.C. and C., Royal Institution, LIVERPOOL, Eng.; Bernard Dyer, D.Sc., F.C.S., F.I.C., Member of the Society of Public Analysts, 17 Great Tower Street, LONDON, E.C., Eng.; Wm. T. Wenzel, Analyst and Assayer, San Francisco, Cal., and may be obtained of any of the leading Wholesale Druggists in the Northern and Midland Counties.

CRUDE BEESWAX,

Foreign and Domestic.

CERESINE,

Yellow and White.

PARAFFINE WAX,

Refined, all Grades.

We will deliver our goods in 5-cwt. lots ex quay, in any city which is the terminus of a Steamship Line throughout the Kingdom, without trouble or expense to the Buyer.

CABLE ADDRESS—"BOWDLEAR BOSTON."

OZOKERITE,

In Bales.

CARNAUBA,

or BRAZIL WAX.

JAPAN WAX

in Cases.

W. H. BOWDLEAR & CO., BOSTON, MASS., U.S.A.

Office and Warehouse—36 CENTRAL WHARF.

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American Refined Petroleum.

The long established superiority of "**Tea Rose**," "**Royal Daylight**," "**White Rose**," and "**Westminster**" American Petroleum Oils, manufactured by the Standard Oil Company of the United States, is well known to the Trade and to Consumers, and no Oils are so widely and justly celebrated. Their superior burning qualities, freedom from odour and from any tendency to smoke, and their general excellence, have placed them above comparison with any and all other brands:

In order to meet the largely increasing demand for these oils, and the better to supply the Trade generally, we have arranged to import them from the United States in bulk as well as in barrels. We shall fill the Oil which we import in bulk into barrels at our own wharves, and as our cooperage facilities are modelled upon the best American methods, buyers will receive the Oil in tight and clean packages.

Our Tank Steamers, "**Manhattan**" and "**Bayonne**," in their construction, arrangements, power and size, are in advance of any tank steamers afloat, and each has a carrying capacity of 4,000 tons, equivalent to 28,000 barrels of Oil by each steamer.

We shall keep large stocks of these Oils constantly on hand at all our Importing Centres and Depôts, and in this manner be able to supply the Trade promptly. Being the representatives in the United Kingdom of the Standard Oil Company, of America, we are in the best possible position for supplying the trade on the most favourable terms.

To cover the special requirements of London buyers, we have completed the construction of a large Storage Wharf at Purfleet, which will be worked in connection with our Depôts at—

AILSA STREET, BOW CREEK, E.

CANAL WHARF, CHALK FARM ROAD, N.W.

ALBANY WHARF, ALBANY ROAD, CAMBERWELL, S.E.

SHIRLEY'S SALEABLE WINTER LINES.

Anti-Catarrh Smelling Salts.



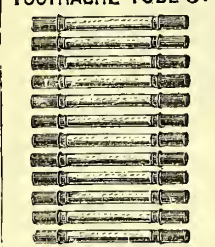
The best Winter Salts in the market.

Attractively put up in well stoppered bottles.

6d. size, 4/- doz.

1s. size, in wide-mouthed actinic green bottle, 6/6 doz.

COCAINE & MENTHOL TOOTHACHE TUBE 6P



Cocaine & Menthol Toothache Tube.

A composition of two such powerful anodynes is sufficient guarantee of their efficacy.

Attractively carded.

3/8 doz.

LIP SALVE.

4d. size in push-up cases.

Delicately Scented. Rich Colour.

1 doz. in glass outer, 2/- doz.



1d. size,

in pocketable flat wooden box, prettily labelled and carded,

7/- gross.

Quality of Lip Salve equal to that in 4d. size.

WINTER SOCKS.

A SURE preventive of cold and damp feet. This is a capital selling line for Chemists. Put up 12 on a card, assorted zes. 3/8 dozen.

THERMOMETERS AND BAROSCOPES

HAVE A QUICK SALE IN COLD WEATHER.

No. 3.—Large-sized Baroscope.—1/-. Combining Thermometer and Storm Glass. Boxwood or Ebonised. 6 on a card. 7/- doz.

No. 2.—Same as No. 3.—9d. Only smaller. 6 on a card. 5/- doz.

No. 1.—Thermometer.—6d. Ebonised or White Enamel. 1 doz. on a card. 4/-.

No. 4.—Thermometer.—1/6. Superior Metal Scale on Black Enamel. 6 on a card. 9/-.

Order a special 20/- parcel of above goods, assorted, as follows:—1 doz. Anti-Catarrh Salts, 4/-; 1 doz. Toothache Tubes, 3/8; 1 doz. 4d. Lip Salve, 2/-; 6 doz. 1d. Lip Salve, 3/6; 1 doz. Winter Socks, 3/8; and 1 doz. 6d. Thermometers, 4/-. This assortment will produce 34/-, thus making a profit of 14/- on an outlay of 20/-.

MENTHOL CONES.

BE PREPARED FOR THE WINTER, IT IS BOUND TO COME.

In a recent Trade Voting, out of 805 voters, Shirley's A1 Brand secured 644 votes, and all the other makers put together but 161. Chemists who do not now buy Shirley's would do well to ask themselves how it is that this Brand secured four times as many votes as all others put together? The answer is simple. Quality is first-class, get-up of Cones is attractive, every assistance given to Retailers in selling, by supplying Dummy Cones, China Models, Cards, &c.



This Elegant Biscuit-China Figure, an Ornament to any Shop,

GIVEN AWAY

To Purchasers of 25/- worth of

SHIRLEY'S A1 BRAND MENTHOL,

Or two if 40/- Order is Placed.

The following special parcels have been arranged to suit all classes of trade:—

Parcel 1. 25/. 4 doz. 7d., 1 doz. 3d., 2 doz. 3d., 3 doz. 4d., 2 doz. 6d.

Parcel 2. 25/. 4 doz. 6d., 2 doz. 4d., 1 doz. 1s.

Parcel 3. 25/. 3 doz. 3d., 2 doz. 1s., 1 doz. 4d.

Parcel 4. 25/. 1 doz. 9d., 2 doz. 1s., 1 doz. 1s. 6d.

By calculating what each of the parcels would realise when sold, it will be found that they yield an average profit of 80 per cent. to the retailer on his outlay.

Parcel 5. 40/. 4 doz. 2d., 2 doz. 3d., 3 doz. 3d., 5 doz. 4d., 4 doz. 6d.

Parcel 6. 40/. 5 doz. 6d., 3 doz. 4d., 2 doz. 1s.

Parcel 7. 40/. 4 doz. 6d., 4 doz. 4d., 1 doz. 9d., 2 doz. 1s.

Parcel 8. 40/. 4 doz. 1s., 2 doz. 9d., 1 doz. 1s. 6d.

1d., 2d., and 3d. Cones put up for those wanting cheap goods.

1d.—3 doz. on card.

No. 110.—Bottle Shape, 7/6 gross.

„ 110v.—Vase „ 7/6 „

„ 110p.—Pedestal „ 8/- „

2d.—3 doz. on card.

No. 114.—Varnished Pedestal,

16/- gross.

3d.—Varnished Draughtsman Shape, 2 doz. on card, 20/- gross.

SPECIAL QUOTATIONS TO LARGE BUYERS.

Good selling Boxwood Shapes are No. 112, 6d. flat, 3/3 doz.; No. 113, Cartridge Shape, 3/6; No. 111, large Pedestal, 7/-.

OCTOBER is always the busiest Month in Menthhol Cones, so please order early to ensure delivery. Do not wait till the cold actually sets in, but be prepared.

ARTHUR W. SHIRLEY, 30 PATERNOSTER SQ., LONDON, E.C.

And 11, 12, and 13 ROSE STREET, NEWGATE STREET.

COOK'S ANTISEPTIC SOAP

(THOMSON'S PATENT).

A most carefully conducted set of experiments by eminent members of the Medical Profession has established the fact that this Soap is of the highest value in the treatment of ECZEMA, RINGWORM, SCABIES, FAVUS, and other Diseases of the Skin.

It has also been tested in a Physiological Laboratory as a germ destroyer, and proved to be more efficient than any other experimented with.—See "*Journal of the Society of Chemical Industry*," 1888. No. 3.

Messrs. E. COOK & CO. have received from Medical Men numerous communications testifying to the success that has attended the use of this Soap, most of which cannot be published; but Messrs. E. C. & Co. have the permission of many of the writers to show the originals to members of the Medical Profession.

CAN BE OBTAINED THROUGH

MESSRS. S. MAW, SON & THOMPSON, OF LONDON,
OR DIRECT FROM THE MAKERS.

Price, in 3-tablet Boxes, per doz., 12/-, Selling Price, 1/6; in $\frac{1}{4}$ -gross Boxes, 10/6 per box.

Messrs. E. COOK & CO. will, with pleasure, send sample, free of charge, to Medical Men on application.

Manufactured by **EDWARD COOK & CO., LONDON**, Makers of COOK'S Celebrated GOLD MEDAL PRIMROSE, MOTTLED, & SOFT SOAPS; also of COOK'S LIGHTNING CLEANSER, and COOK'S HIGH-CLASS TOILET SOAPS.

Speciality—**SAVON DE LUXE.**

Established—NORWICH, 1790; LONDON, 1819.

SPECIAL TERMS FOR CHEST PROTECTORS

LYNCH & CO.

Respectfully invite the attention of Chemists to the subjoined Terms for their CHEST PROTECTORS, which are made of the very best quality materials as hitherto.

THEY DO NOT SUPPLY SECOND QUALITY. ONLY THE BEST!

Catalogue
number.

324 CHAMOIS AND FLANNEL.

	No. 1	2	3	4	5	6
Gents'	per dozen 10/6	12/6	14/6	17/	23/	—
Ladies'	7/6	9/6	11/6	14/	20/	—
Children's	"	"	6/			

325 FELT, SCARLET, OR WHITE.

	No. 1	2	3	4	5	6
Gents'	10/	11/6	13/6	16/	21/	27/
Ladies'	7/	9/	11/	13/6	19/	22/
Children's	"	"	5/			

Sizes of above—No. 1, 9 × 10 in.; No. 2, 9½ × 11 in.; No. 3, 10½ × 12 in.; No. 4, 12 × 14 in.; No. 5, 13 × 15 in.; No. 6, 14 × 16 in.

	No. 1	2	3	4	5	6
326 "DREADNOUGHT," felt, covering chest and back	16/6	22/	27/	33/	44/	50/
Children's			12/6			

326A "DREADNOUGHT," chamois and flannel, per doz., No. 1, 18/; No. 2, 24/; No. 3, 30/; No. 4, 36/; No. 5, 48/6; No. 6, 55/.

326B "WAISTCOAT PATTERN," chamois and flannel, per doz., No. 1, 23/; No. 2, 31/6; No. 3, 40/; No. 4, 49/6; No. 5, 61/; No. 6, 71/.

326C "WAISTCOAT PATTERN," felt, scarlet and white, per doz., No. 1, 20/; No. 2, 28/6; No. 3, 36/; No. 4, 44/; No. 5, 54/6; No. 6, 67/.

326D "CUIRASS," chamois and flannel, per doz., No. 1, 26/6; No. 2, 33/; No. 3, 39/6; No. 4, 47/6; No. 5, 59/6; No. 6, 72/.

327 "CUIRASS," felt, reaching from neck to hips, front and back, and fastening with laces and eyelets, five sizes, per doz., No. 1, 24/; No. 2, 30/; No. 3, 36/; No. 4, 43/; No. 5, 54/; No. 6, 66/.

(Sizes of "Cuirass"—No. 1, 11½ × 9½ in.; No. 2, 13 × 11 in.; No. 3, 16 × 11½ in.; No. 4, 17 × 13 in.; No. 5, 18 × 14 in.; No. 6, 18 × 17½ in.)

327A CUIRASS JACKETS, with half sleeves, buttoning down front, made of perforated chamois leather and porous scarlet flannel, in four sizes, each, 32 × 18 in., 6/6; 34 × 18½ in., 7/6; 37 × 20½ in., 8/6; 39 × 21 in., 9/6.

(Larger or smaller sizes made to order.)

CHEST PROTECTORS MADE OF PINE FELT.

Specially Recommended for Rheumatism.

SINGLE—

	No. 1	2	3	4	5
Gents'	per dozen 10/6	12/6	14/6	17/	23/
Ladies'	7/6	9/6	11/6	14/	20/
Children's	"	"	6/		

DOUBLE, Covering—

Chest and back	16/6	22/	27/	33/	44/
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Ordinary Quantity 10% Monthly Account.

By £2 Worth 15% " "

By £10 Worth 20% " "

By £50 Worth 25% " "

Aldersgate Street, London, E.C.

THE BEST NATURAL APERIENT.

The APOLLINARIS COMPANY, LIMITED, London, beg to announce that, as numerous Hungarian Aperient Marks, Names, and Designations used for the Hungarian Aperient them, they have now adopted an comprising their Registered

which

A RED

This Label will henceforth also serve APERIENT WATER SOLD BY THE COM-

DEMAND THE

and insist upon receiving the HUNGARIAN APERIENT WATER of the APOLLINARIS COMPANY, LIMITED, London.

Of all Druggists and Mineral Water Dealers.

Waters are offered to the public with very similar to those which are Water so long imported by additional Label of their own, Trade Mark of selection, consists of

DIAMOND.

to distinguish the HUNGARIAN COMPANY from all other Aperient Waters.

DIAMOND MARK,

Cadbury's Cocoa

IS SOLUBLE
and ABSOLUTELY PURE. ABSOLUTELY PURE.

WRIGHT

WHOLESALE & EXPORT DRUGGISTS,
DRUG GRINDERS,

IMPORTERS AND DISTILLERS OF ESSENTIAL OILS,

MAKERS OF

Granular Effervescing Salts. Citrate Iron and Quinine. Ammonio-Citrate Iron.

PEPSIN.

EXPRESSED JUICES.

Umney's Fluid Extract
Cinchona Bark.
Essential Oil Almonds,
Freed from Prussic Acid.

LAYMAN

Green Extracts.
Fluid Extracts.
Preparations of British
Pharmacopoeia, 1885.

MANUFACTURING CHEMISTS.

LATEST NOVELTIES IN & NORWEGIAN COD-LIVER OIL,
PHARMACY & THERAPEUTICS. Finest Non-Congeaing (Season 1889).

SAL VOLATILE, SPIRITS NITRE, &c., of English Manufacture, in Bond.

ETHER, CHLOROFORM & ALCOHOL in Bond.

PRICES CURRENT ON APPLICATION.

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